Geraldton District Fisheries Management Plan 1988 - 2000

Draft Plan - May,1988

Ontario
Ministry of Natural Resources

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PREFACE

A fisheries management plan specific to the Geraldton District is being produced by the Ontario Ministry of Natural Resources for the period 1988 to 2000.

The development of this plan is viewed as a partnership with you, the public. Public comments received by October 30, 1987 on the "Background Information and Optional Management Strategies" report were summarized and analyzed. These comments were used in the preparation of the draft plan.

It is now time for you to let us know your views on our proposed management program. Both positive comments and suggestions for improvements to the plan are useful to us.

We encourage you to: (1) review the information in this document; (2) talk to us to clarify any particular concern; (3) attend one of the open houses planned for Nakina, Longlac and Geraldton; and (4) fill out the enclosed questionnaire, write down your comments, come into the district office and talk to us, or call us.

All comments and questionnaires will be reviewed prior to formulating the final plan. Please be sure to provide your comments within 15 days after the open houses so we have time to consider them.

You may obtain additional information or provide your comments to the following address:

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Earl H. Stone
District Manager

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EXECUTIVE SUMMARY

Planning Process

This draft document is the seventh of nine steps in the planning process, and your review is the eighth:

1. Preparation of the "Terms of Reference".
2. Identification of objectives and targets.
3. Collection and analysis of background information, identification of problems and issues.
4. Identification of optional management strategies.
5. Preparation and publication of "A Summary of Background Information and Optional Management Strategies".
6. Open Houses, presentation. Public review and analysis.
7. Preparation and publication of the "Draft Fisheries Management Plan".
8. **Open Houses, presentation. Public review and analysis of Draft Plan.**
9. Preparation and publication of the "Geraldton District Fisheries Management Plan".

The Geraldton District Fisheries Management Plan is expected to be approved by the end of July, 1988.

The Resource

Geraldton District is the largest of five districts in the North Central Region of the Ontario Ministry of Natural Resources. It covers a land area of 110,075 sq km of which almost 10% is water. There are 10,380 lakes and about 6,600 km of rivers and streams.

Walleye, northern pike and lake whitefish are found across most of the District. Brook trout are found in rivers and streams of the Albany River and Winisk River drainage systems. There are 18 known lake trout lakes scattered mainly south of the Albany River. Smallmouth bass are present in localized areas. Lake sturgeon are present in the large rivers and some of the larger lakes.

The total potential fish yield is 5,935,000 kg per year. The total allowable sport fish yield is 3,722,000 kg per year, consisting mainly of walleye, northern pike, and lake whitefish.

Present and Projected use (Year 2000)

In 1980, an estimated 20,400 adult anglers expended 207,000 angler days of fishing in the Geraldton District and harvested 414,000 kg of sport fish. In 2000, an increase of anglers to 22,000 are expected to expend an effort of 223,000 angler days and harvest 446,000 kg of sport fish.

In 1986, the commercial fish harvest totalled 52,719 kg from a quota of 461,275 kg. The projected use in 2000 will probably reflect historical harvests of under 150,000 kg.

In 1985, 64,000 dozen bait fish were harvested by commercial bait fishermen. The projected commercial bait-fish harvest is to meet the demand of 67,700 dozen.

The Indian subsistence fishery harvested an estimated 93,280 kg in 1986. The projected harvest is 98,784 kg.

The total present use and allocation is 968,555 Kg. The total projected use and allocation is 1,006,059 kg, which is 27% of the total allowable sport fish yield.

Targets - Year 2000

The year 2000 targets are:

(1) to meet the demand by anglers of 223,000 angler days with a harvest of 446,000 kg of sport fish;
(2) to harvest the commercial fishing quota of 487,000 kg (this target will require an amendment in the future as quotas are realigned to reflect historical harvests);
(3) to harvest a maximum of 20,840 kg of lake trout;
(4) to meet the anticipated demand by anglers of 67,700 dozen bait-fish.

Problems and Issues

Five problems and issues that affect the utilization and sustainability of the fisheries resource have been identified. They are: a need of fisheries management information; protection of fisheries habitat; need to increase public awareness and understanding; loss of fish and fishing opportunities; and user conflicts.

Management Direction

A strategy is a course of action designed to overcome a particular problem or issue, and thereby meet a target. The accomplishment of strategies are through tactics or specific actions.

Strategies and tactics have been proposed in this report to overcome the identified problems and issues and to meet the targets. The Geraldton District is being divided into four fisheries management zones to reflect different combinations of strategies and tactics. These strategies and tactics must be applied selectively across the District for the following reasons:

- road accessibility is concentrated in the extreme southern portion of the District;
- resource extraction activities and other land use activities are predominantly concentrated in the extreme southern portion of the District;
- problems and issues differ significantly across the District;
- the distribution of fisheries resource users varies greatly across the District;
- there is an unequal distribution of fish species across the District;
- the logistics of achieving strategies requires that different tactics be employed (i.e., operating costs increase steadily from the southern boundary of the District, to the northern boundary).

Increasing harvests of sport fish, commercial fish and bait-fish will be necessary to meet targets.

The proposed tactics include:

- trophy status regulations for lake trout, brook trout, walleye and northern pike;
- regulation changes to address the overharvest of lake trout and brook trout;
- realigning commercial fish quotas to reflect historical harvests, thereby allowing for increased remote sport fishing opportunities;
- continue to protect remote sport fishing opportunities;
- initiate new day-use sport fishing opportunities.

Implementation

The tactics have been priorized within each zone, and a proposed 5-year implementation schedule (1988-1992) of tactics is presented.

SOMMAIRE

Processus de planification

Ce document provisoire constitue la septième des neuf étapes du processus de planification. L'examen que vous en ferez sera donc la huitième étape.

1. Élaboration du «Cadre de référence».
2. Identification des buts et objectifs.
3. Cueillette et analyse des renseignements généraux et identification des problèmes.
4. Identification des stratégies de gestion optionnelles.
5. Élaboration et publication d'un «Résumé des renseignements généraux et stratégies de gestion optionnelles».
6. Présentation lors de journées d'accueil. Examen public et analyse.
7. Élaboration et publication de la version provisoire du Plan de gestion des pêches.
8. **Présentation lors de journées d'accueil. Examen public et analyse du Plan provisoire.**
9. Élaboration et publication de la version finale du Plan de gestion des pêches du district de Geraldton.

On prévoit l'approbation du Plan de gestion des pêches du district de Geraldton d'ici la fin du mois de juillet 1988.

Les ressources

Le district de Geraldton est le plus grand des cinq districts du ministère des Richesses naturelles dans la région du Centre-Nord. Il couvre une superficie de 110 075 km^2, dont 10 pour 100 est constituée d'eau. Le district compte 10 380 lacs et environ 6 600 km de rivières et autres cours d'eau.

La presque totalité des eaux du district abrite du doré, du brochet et du grand corégone. On trouve de l'omble de fontaine dans les rivières et dans les cours d'eau du système de drainage des rivières Albany et Winisk. Le district compte au moins 18 lacs à touladi au sud de la rivière Albany. On trouve de l'achigan à petite bouche dans certains lacs et de l'esturgeon de lac dans les grandes rivières et certains grands lacs.

Le rendement potentiel global des eaux du district est de 5 935 000 kg par année. La récolte globale acceptable, en ce qui concerne le poisson gibier, est de 3 722 000 kg par année et se constitue principalement de dorés, de brochets et de grands corégones.

Récolte actuelle et prévue (en l'an 2000)

En 1980, près de 20 400 personnes ont profité de l'équivalent de 207 000 jours de pêche dans le district de Geraldton et ont récolté 414 000 kg de poisson gibier. En l'an 2000, nous prévoyons que le district accueillera 22 000 pêcheurs qui récolteront 446 000 kg de poisson gibier pendant l'équivalent de 223 000 jours de pêche.

En 1986, les récoltes de pêche commerciale ont atteint 52 719 kg de poisson sur un quota de 461 275 kg. La récolte prévue en l'an 2000 reflètera probablement les tendances habituelles pour atteindre un peu moins de 150 000 kg.

En 1985, 64 000 douzaines de poissons d'appât ont été récoltées par des entreprises commerciales. La récolte commerciale de poissons d'appât devrait répondre à la demande de 67 700 douzaines de poissons.

Les récoltes de subsistence des Indiens s'élevaient à 93 280 kg en 1986. Elles atteindront environ 98 784 kg en l'an 2000.

Le total de la récolte acceptable actuelle est de 968 555 kg; elle sera de 1 006 059 kg en l'an 2000, soit une augmentation de 27 pour 100 de la récolte acceptable de poisson gibier.

Objectifs pour l'an 2000

Les objectifs pour l'an 2000 sont les suivants :

(1) répondre à la demande de 223 000 jours de pêche et de 446 000 kg de poisson gibier;
(2) récolter l'équivalent du quota de 487 000 kg de poisson pour la pêche commerciale (cet objectif nécessitera des modifications aux quotas futurs pour refléter les récoltes habituelles);
(3) récolter un maximum de 20 840 kg de touladi;
(4) répondre à la demande prévue de 67 700 douzaines de poissons d'appât.

Problèmes

Nous avons cerné cinq problèmes qui influent sur l'utilisation et la capacité des ressources de pêche du district. Ces problèmes sont les suivants : nécessité d'obtenir des données sur la gestion des pêches, protection de l'habitat des poissons, besoin de sensibiliser davantage le public, diminution des populations de poisson et perte de possibilités de pêche et enfin, conflits entre les utilisateurs.

. . . v)

Orientation du programme de gestion

Une stratégie consiste en une série d'initiatives visant à surmonter un problème particulier et, par le fait même, d'atteindre un objectif. On la met en application au moyen de différentes tactiques, ou initiatives particulières.

Des stratégies et tactiques ont été proposées dans ce rapport pour surmonter les problèmes cernés et atteindre des objectifs. Le district de Geraldton sera divisé en quatre zones qui permettront l'application de différentes combinaisons de stratégies et tactiques. Ces stratégies et tactiques doivent être appliquées avec discernement d'un bout à l'autre du district pour les raisons suivantes :

- les routes d'accès sont concentrées dans l'extrême sud du district;
- les activités d'exploitation des ressources et autres utilisations des terres sont concentrées dans l'extrême sud du district;
- les problèmes varient d'un bout à l'autre du district;
- la répartition des utilisateurs des ressources de pêche n'est pas uniforme d'un bout à l'autre du district;
- les espèces de poissons ne sont pas réparties uniformément dans les eaux du district;
- pour que les stratégies soient efficaces, il est nécessaire d'avoir recours à différentes tactiques (c.-à-d. que les coûts d'opération augmentent considérablememnt du sud au nord du district).

Pour atteindre les objectifs fixés, il sera nécessaire d'accroître les récoltes de poissons gibiers, de poissons destinés à la consommation, et de poissons d'appât.

Parmi les tactiques proposées, on compte :

- l'élaboration d'une nouvelle règlementation concernant les trophées de pêche pour le touladi, l'omble de fontaine, le doré et le brochet;
- la modification des règlements pour contrer le problème de la surpêche du touladi et de l'omble de fontaine;
- la modification des quotas de pêche commerciale pour qu'ils reflètent mieux les récoltes habituelles, permettant du même coup d'augmenter les possibilités de pêche sportive dans les régions éloignées;
- le maintien des possibilités de pêche sportive en régions éloignées;
- l'instauration de nouvelles possibilités de pêche sportive d'une journée.

Mise en application

Les tactiques seront mises en application selon les besoins particuliers de chacune des zones. Pour ce faire, un horaire de mise en application sur cinq ans (1988-1992) a été proposé.

1.0 INTRODUCTION

1.1 Purpose

The Geraldton District Fisheries Management Plan (G.D.F.M.P.) is to provide fish managers with a long-term direction (1988 to 2000) of fisheries management efforts within the Geraldton District. It specifically describes those fisheries management actions to be carried out on the basis of 5-year intervals.

The Geraldton Administrative District of the Ontario Ministry of Natural Resources (O.M.N.R.) is the largest of five districts within the North Central Region (Figure 1). It covers a land area of 110,075 km^2 of which 10,607 km^2 (9.64%) is water (Figure 2).

1.2 Planning Process

The initial thrust for district fisheries management planning was generated by the development of the Strategic Policy for Ontario Fisheries (S.P.O.F.) in the 1970's. The Strategic Land Use Plan for Northwestern Ontario (S.L.U.P.) (O.M.N.R., 1982) presented broad objectives and targets for sport fish, commercial fish, bait-fish and lake trout for this area of the Province, including specific targets for the Geraldton District. These specific targets were tested through a detailed resource analysis, based on updated information (O.M.N.R.a, 1987, unpublished). As a result of this analysis, the specific management targets for sport fish, commercial fish, bait-fish and lake trout were refined.

The G.D.F.M.P. is part of the Ministry of Natural Resources integrated resource management planning program. The S.L.U.P. document and the Planning Manual for District Fisheries Management Plans (O.M.N.R., 1986.) provide the framework used to prepare this plan.

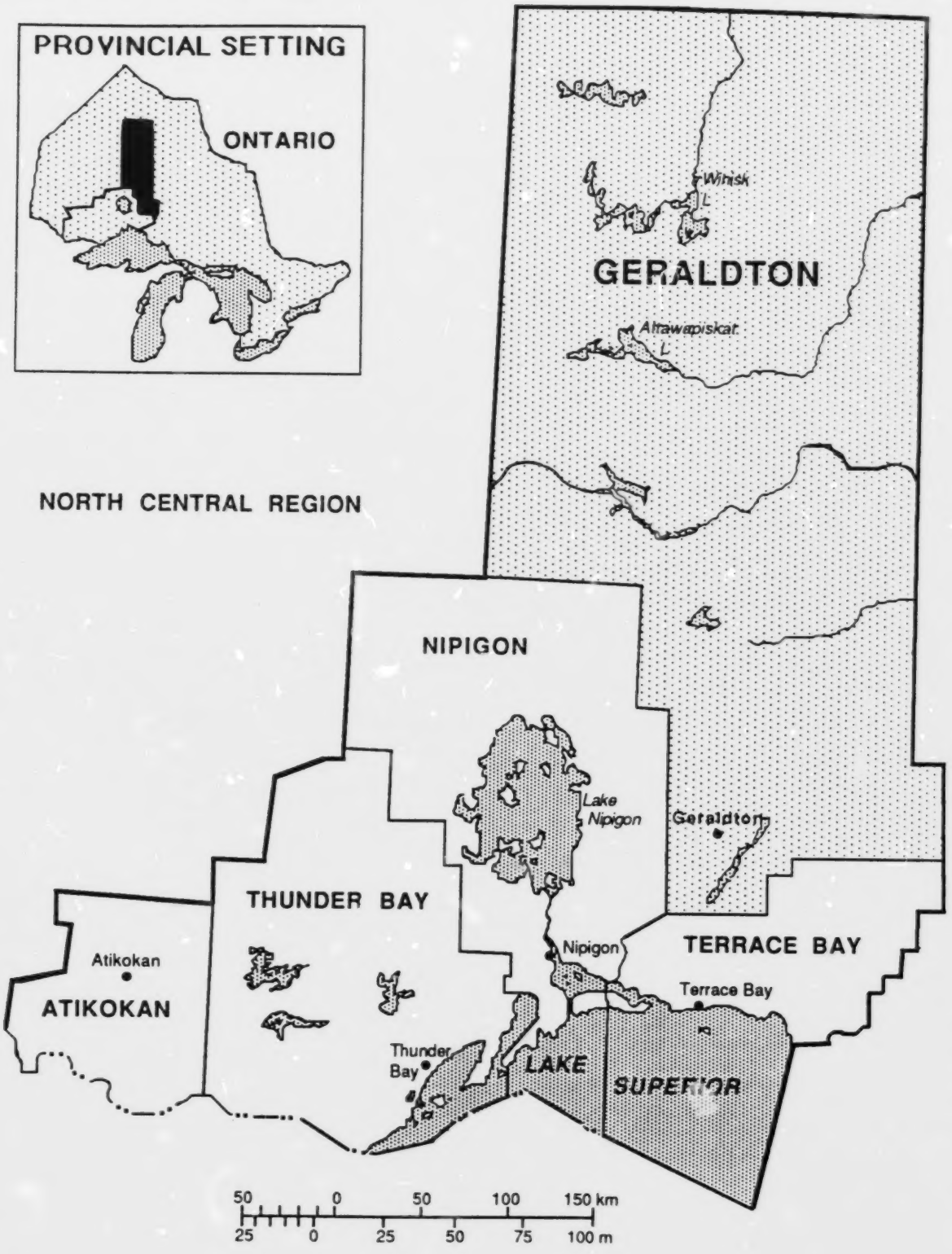
The development of this plan is viewed as a partnership with you, the public, and your input plays a key role in future fisheries management in the Geraldton District. Figure 3 illustrates the schedule of preparation.

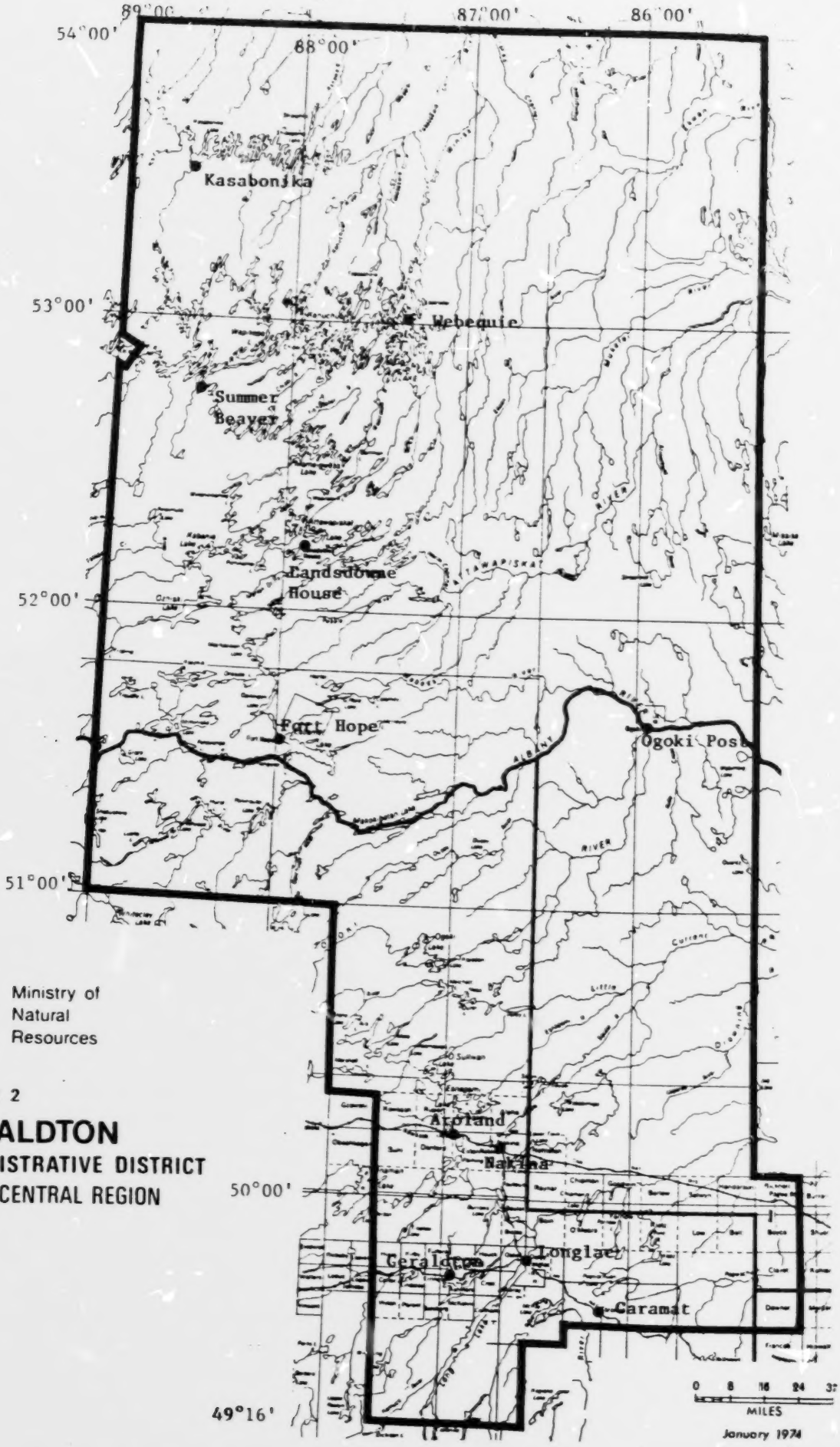
1.3 Existing Policy and Technical Direction

This plan adheres to current Ontario Ministry of Natural Resources policies and has been coordinated with the various other programs in this Ministry and Ministry of Tourism and Recreation to ensure a consistent and efficient approach to resource management. The principles of fisheries management outlined in the S.P.O.F. documents, and the feasibility of existing technology directed the selection of management strategies. All proposed fisheries management practices and programs will be subject to approval (if applicable) under the Environmental Assessment Act before being implemented, and documented as per the Field Environmental Planning Procedures.

The allocation of fish to Indian people under recognized Treaty Rights is an integral part of District Fisheries Management Plans. Negotiations are ongoing at Federal and Provincial levels to develop Indian Fishing Agreements. These agreements should ultimately be the guidelines for local Band fishing agreements. When Indian Fishing Agreements are reached, this plan will be revised if necessary.

FIGURE 1:
GERALDTON DISTRICT REGIONAL AND PROVINCIAL SETTING





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Ontario

FIGURE 2

GERALDTON
ADMINISTRATIVE DISTRICT
NORTH CENTRAL REGION

The G.D.F.M.P. only highlights some of the background studies and analyses undertaken during the development of the plan. The following documents, available for review at the Geraldton District Office, were prepared during the planning process:

(i) "Terms of Reference: Geraldton District Fisheries Management Plan" (O.M.N.R., 1987b)
- outlines intent of plan, the planning process, timing, and the communications plan.

(ii) "Background Information: G.D.F.M.P. (1988 - 2000)" (O.M.N.R., 1987a)
- details the fisheries resource, its current and projected use, and target refinements; identifies problems and issues; and details the present fisheries management practices.

(iii) "Identification of Optional Fisheries Management Strategies and Tactics: G.D.F.M.P. (1988 - 2000)" (O.M.N.R., 1987c)
- identifies optional management strategies and tactics to overcome the problems and issues, and to meet the targets.

(iv) "A Summary of Background Information and Optional Management Strategies: G.D.F.M.P. (1988 - 2000)" (O.M.N.R., 1987d)
- a published public document which summarizes the two above reports, and formed the main basis for public review.

(v) "Summary of Public Consultation to the G.D.F.M.P. Background Information and Optional Management Strategies" (O.M.N.R., 1987e)
- summarizes efforts made to contact the public to increase awareness of the planning process and to advertise public review and consultation
- summarizes all public input received (separate written submissions, verbal public responses and questionnaires; open house evaluations).

(vi) "Analysis of Optional Management Strategies and Tactics" (O.M.N.R., 1987f)
- presents an analysis of the pros and cons of the optional management strategies and tactics; the selection of the preferred options were in much consideration of public input during the first public review period, and are included in this draft plan for public consideration.

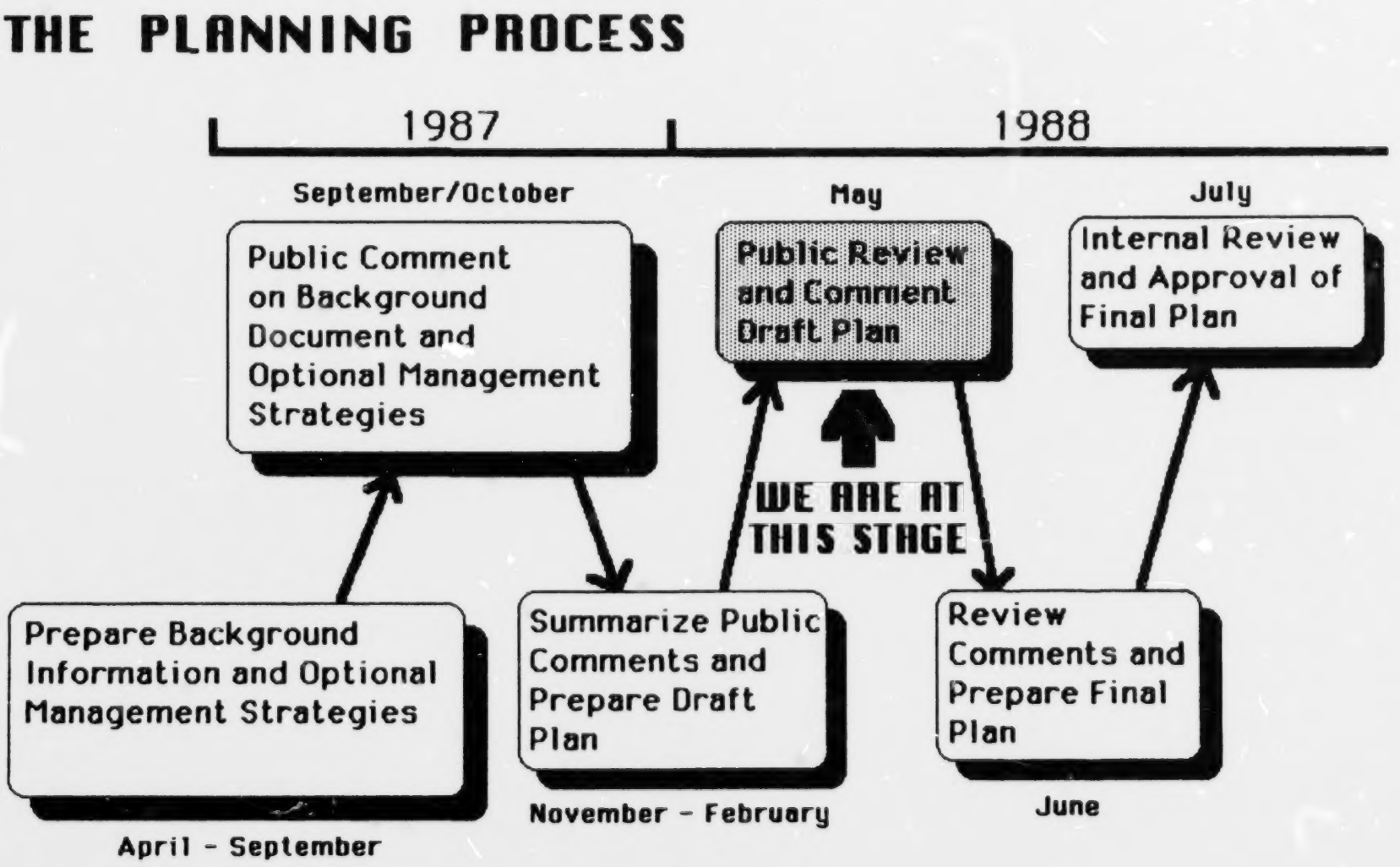


Figure 3. Schedule of the preparation of the Geraldton District Fisheries Management Plan.

2.0 DISTRICT FISHERIES PERSPECTIVE

2.1 The Fisheries Resource

There are 10,380 lakes (area of 10,039 km^2) in the District and 6571 km (area of 568 km^2) of rivers and streams.

Approximately 97% of the watercourses flow north within the Arctic watershed, with the remainder flowing into the Great Lakes - St. Lawrence River System. The Albany River system makes up the largest drainage system in the District, and roughly divides the District in half.

Of the 503 District lakes with known fish species composition, 90% can be classified as warmwater lakes, while 10% can be classified as coldwater lakes. Coldwater lakes are characteristically deep, less productive and contain lake trout and/or brook trout as top predators in the fish community. Warmwater lakes are characteristically shallow, more productive and contain walleye and/or northern pike as top predators. Other fish species present in the District include lake whitefish, yellow perch, lake sturgeon, smallmouth bass and coarse fish such as suckers, ciscoes and burbot.

There are only 18 natural lake trout lakes and 20 natural brook trout lakes known in the District. Northern pike are known in 449 lakes; walleye in 296; and lake whitefish in 171. Smallmouth bass populations are found in 8 lakes, the result of stocking in the 1950's and their subsequent emigrations. Lake sturgeon are known in 32 waterbodies, covering 18% of the District's total water area.

There are 194 coldwater rivers and streams known or strongly suspected to have brook trout populations covering 5,336 km, or 42,100 ha. There are 226 warmwater rivers and streams covering 5,302 km, or 17,700 ha.

2.2 Potential Fish Yields

The estimated total potential fish yield for the District is 5,935,000 kg/yr (Table 1). The total allowable sport fish yield is 3,722,000 kg/yr, with walleye and northern pike contributing the majority (64%) from known fish community waterbodies (Table 2). Lakes provide 93% of the total potential fish yield and 90% of the total allowable sport fish yield. Major rivers and streams supply the remainder.

These estimates are based on yield predicting formulas derived from theoretical modelling of fish yields (SPOF Working Group No. 12, 1982). The potential yield is the theoretical annual sustainable harvest of fish that could be derived under optimum environmental, social and economic conditions. Data derived during lake surveys are used to calculate potential yield. The total potential yield for lakes in the District was extrapolated from surveyed lakes, although less than 3% of the lakes, or 33% of the total lake surface area in the District are surveyed. (This extrapolation is at present the best estimate that can be made. More accurate figures will be available when a larger percentage of District waters have been surveyed). The potential yield from rivers and streams was estimated at 5.0 kg/ha/yr, while for large rivers, the estimate is 7.772 kg/ha/yr.

Allowable yield is the recommended maximum sustainable annual harvest of a particular fish species, recognizing such constraints as habitat suitability, angler preferences, social concerns and past harvesting. The allowable yield of a fish species is a fraction of the potential yield and is usually calculated by the partitioning outlined by SPOF Working Group No. 12 (1982).

Table 1: Summary of fisheries resource data for the Geraldton District.

	No. of Waterbodies	Total Surface Area (ha)	Length (km)	Total Potential Fisheries Yield (kg.yr^{-1})
INLAND LAKES				
Coldwater Surveyed	27	34,246	NA	123,673
Warmwater Surveyed	219	293,624	NA	1,675,246
Coldwater Unsurveyed	25	3,611	NA	13,163
Warmwater Unsurveyed	232	59,474	NA	343,584
Unknown Warmwater	9,874	612,975	NA	3,345,402
TOTAL	10,377	1,003,930		5,501,068
MAJOR RIVERS/STREAMS				
Coldwater	194	42,100	5,336	308,004
Warmwater	226	17,700	5,302	125,928
TOTAL	420	59,800	10,638	433,932
DISTRICT TOTALS	10,797	1,063,730	10,638	5,935,000

Surveyed - intensively studied under a program such as Aquatic Habitat Inventory Program
Unsurveyed - only fish community known
Unknown - fish community unknown

TABLE 2. Known fish species data, allowable species yield and total allowable sport fish yield for the Geraldton District

Sport Fish Species	No. of Lakes	No. of Streams and Rivers	Total Known Water Area Available to Species (ha)	Allowable Species Yield (Kg/ha/yr)	Allowable Species Yield (Kg/yr)	% of Total
Known Fish Community						
Walleye	296	212	404,452	1.78	720,817	19.4
Northern Pike	450	236	440,908	1.42	627,239	16.9
Other Sport Fish:					771,467	20.7
Lake Trout	18	nil	35,878	0.58	20,843	0.6
Brook Trout (natural)	20	194	65,657	1.36	89,320	2.4
Smallmouth Bass	8	nil	5,829	0.37	2,167	<0.1
Yellow Perch	171	nil	274,035	0.69	189,862	5.1
Lake Whitefish	171	2	357,733	1.31	469,275	12.6
Unknown Fish Community	9874	nil	612,935	2.61	1,602,477a	43.0
				Total Allowable Sport Fish Yield =	3,722,000	100.0

a. assuming total sport fish partitioning of 48%, of the 3,345,313 kg/yr total unknown potential yield

2.3 Resource Use and Projections

2.3.1 Sport Fishing

It was estimated that in 1980, 20,400 adult anglers expended 207,000 angler days of fishing (Bedi and Clifford, 1982), and harvested 414,000 kg of sport fish, for a quality catch standard of 2 kg/angler day (O.M.N.R., 1982). The total allowable sport fish yield available to anglers at present is 3,167,500 kg.

The projected angler participation in the District by the year 2000 is estimated at 22,200 adult anglers, expending 223,000 angler days, and harvesting 446,000 kg of sport fish.

2.3.2 Commercial Fishing

In 1986, 29 gill net and 3 impounding gear licences were issued on 31 waterbodies. The total commercial harvest was 52,719 kg worth $122,162 from a total quota of 461,275 kg worth an estimated $1,057,000.

The projected harvest by the commercial food fishery in the year 2000 is the 1986 quota of 461,275 kg. Map 1 reveals the waterbodies which are presently licenced for commercial fishing.

2.3.3 Bait - Fishing

In 1985, 28 commercial bait-fish harvest licences on 33 whole blocks, and 33 bait-fish dealer's licences, were issued. The reported harvest was 63,971 dozen bait-fish, worth $51,606.

The projected harvest of bait-fish will be to meet the demand of 67,700 dozen in the year 2000. The present resource of bait-fish can easily supply this demand.

2.3.4 Tourist Operations

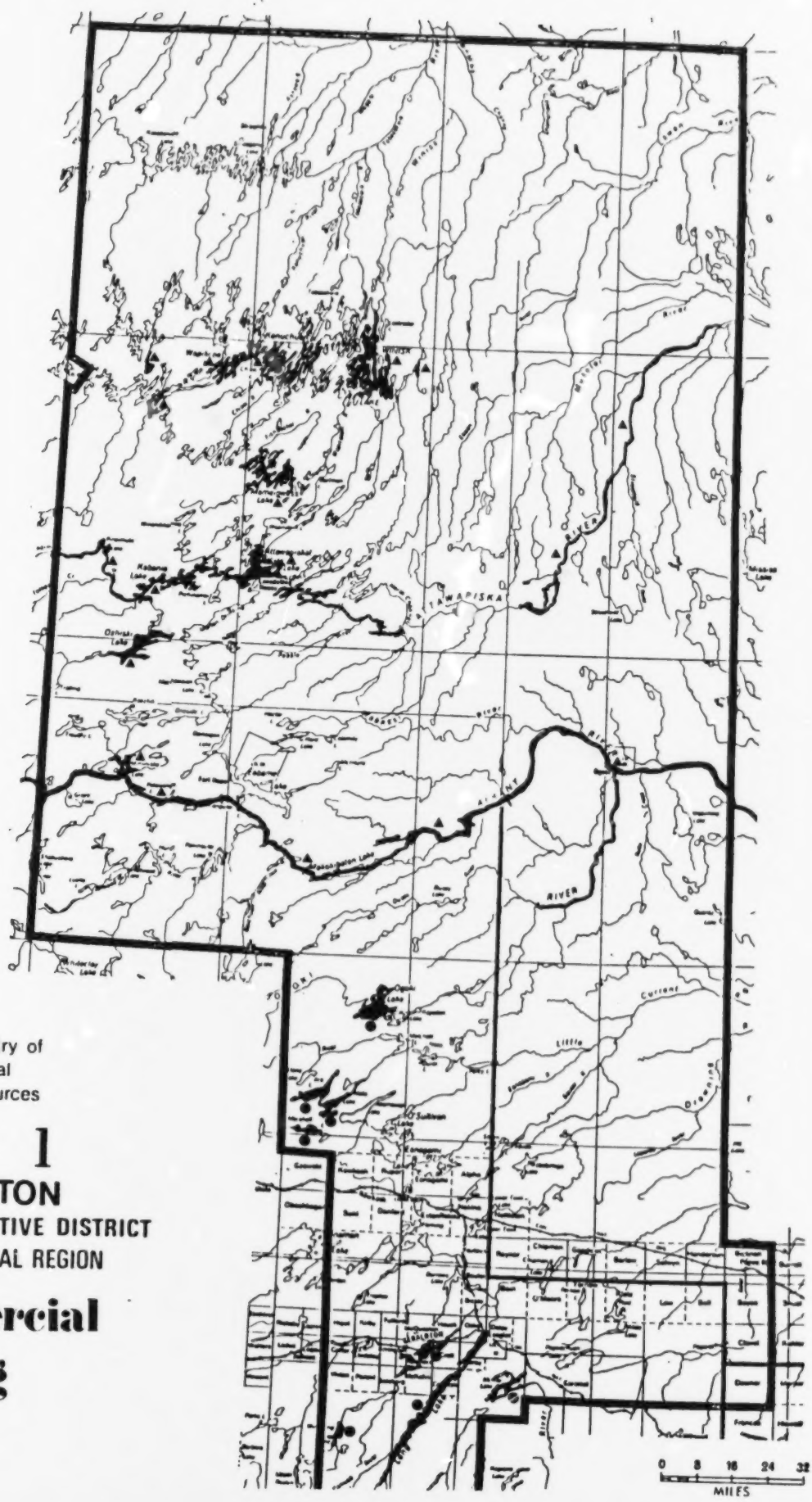
In 1987, there were 56 tourist operators in the Geraldton District which catered to anglers, with 141 outpost camps, 7 fly-in lodges and 27 road accessible lodges on 130 waterbodies. The actual guest capacity is estimated at 1,546 beds. Map 2 shows the locations of outpost camps and lodges in the Geraldton District.

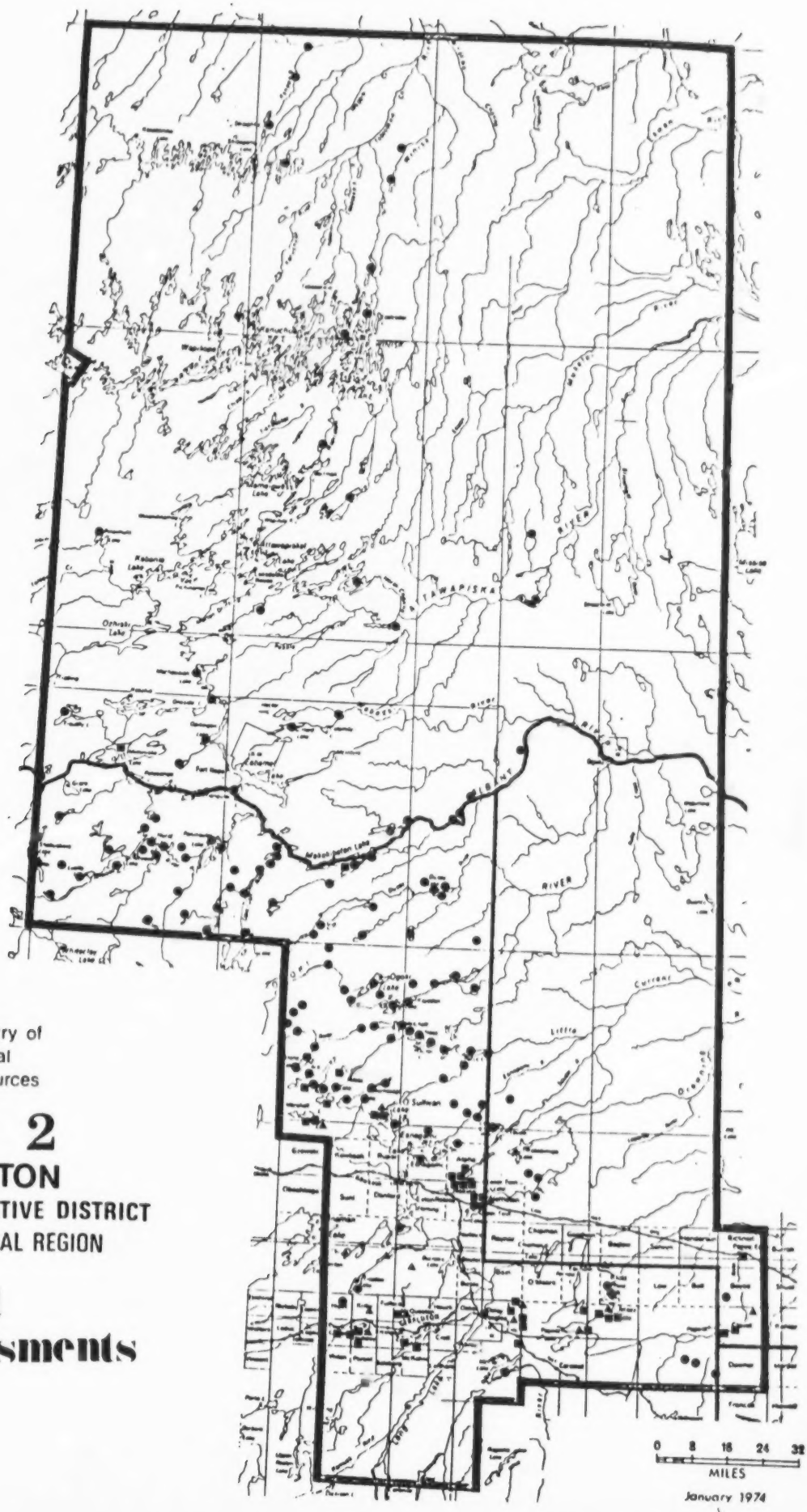
In 1986, tourist resort owners and fly-in outfitters brought in gross revenues of between $3.9 and 4.4 million in the Geraldton District.

Potential exists for tourism development in this District. At this time, the policy requires that an operator be a resident of the area north of the Albany River for any disposition to the tourist industry there.

2.3.5 Indian People

There are ten Indian communities in the District, five of which have reserve status, with a population of 3,028 people (1986). The Indian subsistence harvests were recalculated using updated information obtained from the Draft Plan of the Sioux Lookout District Fisheries Management Plan (O.M.N.R., 1987). South of the Albany River, the Indian subsistence consumption level is estimated at 18 kg of fish/person/yr. The subsistence consumption level for Fort Hope, Ogoki Post and Lansdowne House is estimated at 30 kg/person/yr, while for Summer Beaver, Webequie and Kasabonika, it is estimated at 40 kg/person/yr. In 1986, the Indian subsistence harvest was estimated at 93,280 kg.


LEGEND
Commercial Fishing
Indian
Non-Indian
ATTAWAPISKA RIVER
ALBANY RIVER
Ontario
Ministry of Natural Resources
MAP 1
GERALDTON
ADMINISTRATIVE DISTRICT
NORTH CENTRAL REGION
Commercial Fishing
0 8 16 24 32
MILES



Ontario Ministry of Natural Resources

MAP 2

GERALDTON

ADMINISTRATIVE DISTRICT

NORTH CENTRAL REGION

Tourist Establisments

The projected Indian population is 3,207 people in the year 2000, with an Indian subsistence harvest of 98,784 kg.

2.3.6 Non-Consumptive Users

The number of non-consumptive users is presently unknown. Fish viewing areas available in the District are confined to spring spawning runs of walleye, northern pike and suckers, and to fall spawning runs of lake whitefish.

2.3.7 Other Users

O.M.N.R. samples various fish populations to submit fish flesh for contaminant analyses by the Ontario Ministry of the Environment.

Geraldton District has made use of outside agencies to conduct fisheries studies. In addition, scientific institutions such as the Royal Ontario Museum receive small fish collections from aquatic habitat inventories for updating and mapping of fish species distributions in Ontario.

Fish have been donated to the Geraldton Composite High School for educational purposes.

2.4 Target Refinement

Table 3 compares the current and projected use of the fisheries resource with the S.L.U.P. targets for the Geraldton District.

The target for the Indian subsistence fishery has not been addressed at this time, pending ongoing negotiations for Indian fishing agreements.

The refinement of targets for the sport and commercial fisheries involves two steps. Firstly, the projected use is compared to the S.L.U.P. targets, and if the projected use is significantly different, it becomes the target. Secondly, the target determined in the first step is compared to the potential yield. If the target is less than the potential yield, then this target becomes the interim refined target.

The bait-fish target is based on angler projections.

The lake trout target is the allowable lake trout yield.

The sport fish target is to meet the anticipated demand in the year 2000 of 223,000 angler-days, with a quality standard target of 2 kg/angler-day, or 446,000 kilograms of fish.

The commercial fish target is to meet the demand of 487,000 kg of commercial food fish allocation by the year 2000. This target is currently under review, as historical harvests have been well below allocations (quotas) north of and including the Albany River. As quotas are realigned to reflect historical harvests, the target will require an amendment in the future.

The bait-fish target is to encourage the bait-fish industry to meet the projected demand of 67,700 dozen bait-fish in the year 2000, through natural and artificial culture.

The lake trout target is to harvest a maximum of 20,840 kg of lake trout (0.58 kg/ha/yr) in the year 2000.

Table 3: Target refinements for the year 2000

	Potential Yield	Current Use	Projected Use	S.L.U.P. Targets	Interim Refined Targets
Subsistence Fishery	3,260,725 kg	93,280 kg	98,784 kg	not addressed	not addressed
Sport Fishery[e]		414,000 kg 207,000 anglers days	446,000 kg 223,000 angler days	420,000 kg 210,000 angler days	446,000 kg[c] 223,000 angler days[c]
Commercial Food Fishery Allocations	461,275 kg[a] 2,213,000 kg[b]	461,275 kg[a]	461,275 kg[a]	487,000 kg[a]	487,000 kg[a]
Commercial Bait Fishery	unknown	64,000 dozen	67,700 dozen	to meet demand	67,700 dozen
TOTAL	5,935,000 kg	968,555 kg	1,006,059 kg	907,000 kg	933,000 kg
Lake Trout (18 lakes, 35,878 ha)	20,843 kg 0.58 kg/ha	d	d	0.25-0.75 kg/ha	20,843 kg 0.58 kg/ha

a. allocated quotas of sport fish to commercial food fisheries (targets under review)

b. potential coarse fish yield (burbot, suckers and ciscoe)

c. the interim refined targets for the sport fishery are at present District targets and will be proposed for amendment to the Strategic Land Use Plan during the next revision.

d. current and projected harvests of lake trout not known.

e. sport fish use in kilograms are based on a quality catch standard of 2 kg/angler day (O.M.N.R., 1982)

2.5 Other Information

Other resource activities and plans directly or indirectly influence fisheries management and availability of fisheries resources to user groups. These include access, timber extraction, mining activities, impoundments and diversions, log driving, provincial park plans, highway corridor plans, new cottage initiative, airborne pollutants and miscellaneous activities.

I Access

(a) Existing Road Networks

In the southern portion of the District, the Trans Canada Highway #11 crosses the District from east to west. Three provincial highways are also located here. Highway #625 travels south from Highway #11 to Caramat. Highway #584 extends from just south of Geraldton, north to Nakina. Highway #643 extends west of Highway #584, through Aroland to the O'Sullivan Lake area.

The majority of access road networks exist south of the Canadian National Railway (C.N.R.) line (from the western District boundary to Nakina, and the previous existing link between Nakina and Pagwa River). North of the C.N.R. line, resource access roads are located mainly south of latitude 50° 30'.

At present, over 150 access points on lakes and rivers are located in the District. The access point at "Second Bridge" on Kenogamisis Lake was upgraded in 1987 through funds generated by the sale of Ontario resident sport fishing licences.

(b) Future Road Networks

Resource access road networks are expected to greatly increase north of the C.N.R. line and south of the Little Current River by the year 2000. Expansion of roads is also planned south of the C.N.R. line, especially in the eastern portion.

II Timber Extraction

The Geraldton District contains twelve management units. Timber extraction currently occurs in the Longlac, Nakina and Lake Nipigon Forests, Big Pic and Geraldton Management Units.

The Nakina and Longlac Forests, and the Geraldton Management Unit are licenced by Kimberly-Clark of Canada Limited, with Third Party Agreement with Weldwood of Canada Limited and Lecours Lumber Co. Limited. The annual timber production target for the year 2000 from these three management units in the Geraldton District, are 1,549,944 m^3 of conifer and 621,984 m^3 of hardwood. During the period 1985 to 1990, the annual timber production will increase by 10% in comparison to the average annual consumption over the period 1980 to 1985.

To ensure integrated resource management, "Areas of Concern" pertaining to the fisheries resource, will be protected following the "Guidelines for the Protection of Fish Habitat in Timber Management" (O.M.N.R., 1986), and the "Guidelines Covering Stream Crossings, Geraldton District" (which includes the "Environmental Guidelines for Bridge Construction", and the "Environmental Guidelines for Culvert Installation") (O.M.N.R., North Central Region policy).

III Mining Activities

There is increasing potential for mining activities in the near future near Long Lake and Kenogamisis Lake, primarily for gold ore extraction.

IV Impoundments and Diversions

There are six dams located in the District. Water fluctuations can be detrimental to fisheries resources by degrading fish habitat and decreasing productivity of fish populations.

The Kenogami River dam and diversion, constructed from 1937 - 1939 (Ontario Hydro, O.M.N.R., Kimberly-Clark of Canada Limited) is used to divert the flow of the Kenogami River into Long Lake. The dam regulates the water level of Long Lake for the hydroelectric Aguasaubon Lake dam and for log driving raw pulp logs (ice-out, until November) by Kimberly-Clark of Canada Ltd. to Terrace Bay. The water levels of the Kenogami River system (including Ogahalla and Chipman Lakes) and Long Lake are affected by the diversion and drawdowns. During the drawdown of Long Lake, the rubble shoreline is often high and dry. The rubble shoreline has potential for being lake trout and lake whitefish spawning grounds. Annually, 122,716 hectare-metres of water (or 1.23 km^3) are diverted through Long Lake (O.M.N.R., 1981).

The five other dams in the District are found on Kenogamisis Lake, McKay Lake, Needle Creek, Sweezy Creek and Marshall Lake.

The Waboose Dam, located in the Nipigon District on the Ogoki River, was constructed by Ontario Hydro in 1943. This dam diverts the flow of the Ogoki River system over the height of land into Lake Nipigon. Annually, 364,198 hectare-metres (or 3.64 km^3) are diverted (O.M.N.R., 1981). Great water fluctuations have been observed in this District on the Ogoki River, and on Ogoki, Kayedon, Harrogate, Patience and Esser Lakes.

V Log Driving

Past log driving has occurred on the following waterbodies in the District: Needle Creek, Kenogamisis River, Burrows River, Kenogami River, Pic River, Namewaminikan River, and Turkey Lake.

Presently, 280,000 cords of pulpwood are rafted down Long Lake annually to the mill in Terrace Bay (O.M.N.R., 1981). Log driving on Long Lake has been conducted since 1940, by Kimberly-Clark of Canada Ltd.

VI Park Plans and Canoe Routes

The interim management statements for the Albany River, Otoskwin-Attawapiskat River, Little Current River, and Winisk River provincial park plans restrict new commercial tourism developments. New commercial fishing licences are restricted in the Otoskwin-Attawapiskat River park planning area. The interim management statement for the Winisk River Provincial Park expresses the need for maintaining and protecting the brook sport fishery in the Winisk River.

Ten major canoe routes are located in the District. Nine of these have been advertised in the "Canoe Routes of Ontario", and fishing effort on these routes is expected to be increased as a result of advertising.

VII Highway Corridor Plan

This plan has been developed to promote and assess the potential for tourism development (lodges) along the corridor of the Trans Canada Highway #11. Lodges that may be located adjacent to waterbodies are expected to have a greater impact on fisheries resources by anglers in this area.

VIII New Cottage Initiative

At present, sites are being considered for cottage development in the Geraldton District. Some sites may require access road construction, and therefore, availability of fisheries resources to anglers may increase.

IX Airborne Pollutants

Acidic precipitation is of minor concern in the District. Only seven lakes of 75 sampled in the District have a low sensitivity to acid loading (Tsang et al, 1986).

The rate of other airborne pollutants in the District are unknown.

X Miscellaneous Activities

The Trans Canada natural gas pipeline runs across the District in a very similar path as the Trans Canada Highway #11. Bell Canada is presently installing a fibre optics line along the right-of-way of Trans Canada Pipeline Ltd. across the District. As this line crosses near walleye spawning sites and across brook trout streams and rivers, protective measures and where necessary, rehabilitation will be imposed to minimize any adverse affects to the fisheries habitat.

A plan exists for the Polar Gas combined pipeline system which is proposed to extend from south of Patte Lake in a southeast direction to Longlac. There is no indication of this plan being initiated in the near future.

3.0 MANAGEMENT DIRECTION

The chart in Figure 4 illustrates the development of fisheries management direction. From the broad fisheries management objective, four specific objectives are developed (sport fish, commercial fish, lake trout, and bait fish management).

Targets which quantify demands by the year 2000 are developed for each of these specific objectives.

Strategies are developed to achieve targets. A strategy is a course of action designed to meet the target, and to overcome particular problems or issues which may impede the achievement of the stated target.

The accomplishment of strategies is through tactics or specific actions that cumulatively contribute toward the achievement of targets, and thereby to the attainment of objectives.

The tactics are then priorized as to their necessity over the period of this plan, which leads to the 5-year implementation schedule of tactics.

3.1 General Fisheries Management Objective

The broad objective for fisheries management in Ontario is:

> "To protect, rehabilitate, enhance and maintain Ontario's fish communities and their environment to provide an optimum contribution of fish, fishing opportunities and associated benefits to society."
>
> (O.M.N.R. 1982)

This broad objective identifies the quality of fish communities to be managed for optimum contributions to society.

The broad objective consists of four general fisheries management principles.

These principles are:

(a) Fish Communities Principle:
"To secure desirable fish communities in the waterbodies of the District based on a foundation of stable self-sustaining stocks."

(b) Water Quality and Habitat Principle:
"To secure an environment which will sustain unimpaired fish communities and those ecosystem components on which they depend."

(c) Contribution to Society Principle:
"To provide an optimum contribution of fish, fishing opportunities and associated benefits to meet society's needs for: wholesome food, recreation, employment and income, and a healthy human environment."

(d) Public Awareness and Scientific Knowledge Principle:
"To contribute to society's understanding of fish ecosystems, and their interdependence with man."

To ensure integrated resource management, the fisheries management strategies are developed with recognition of relevant management strategies of other resource programs.

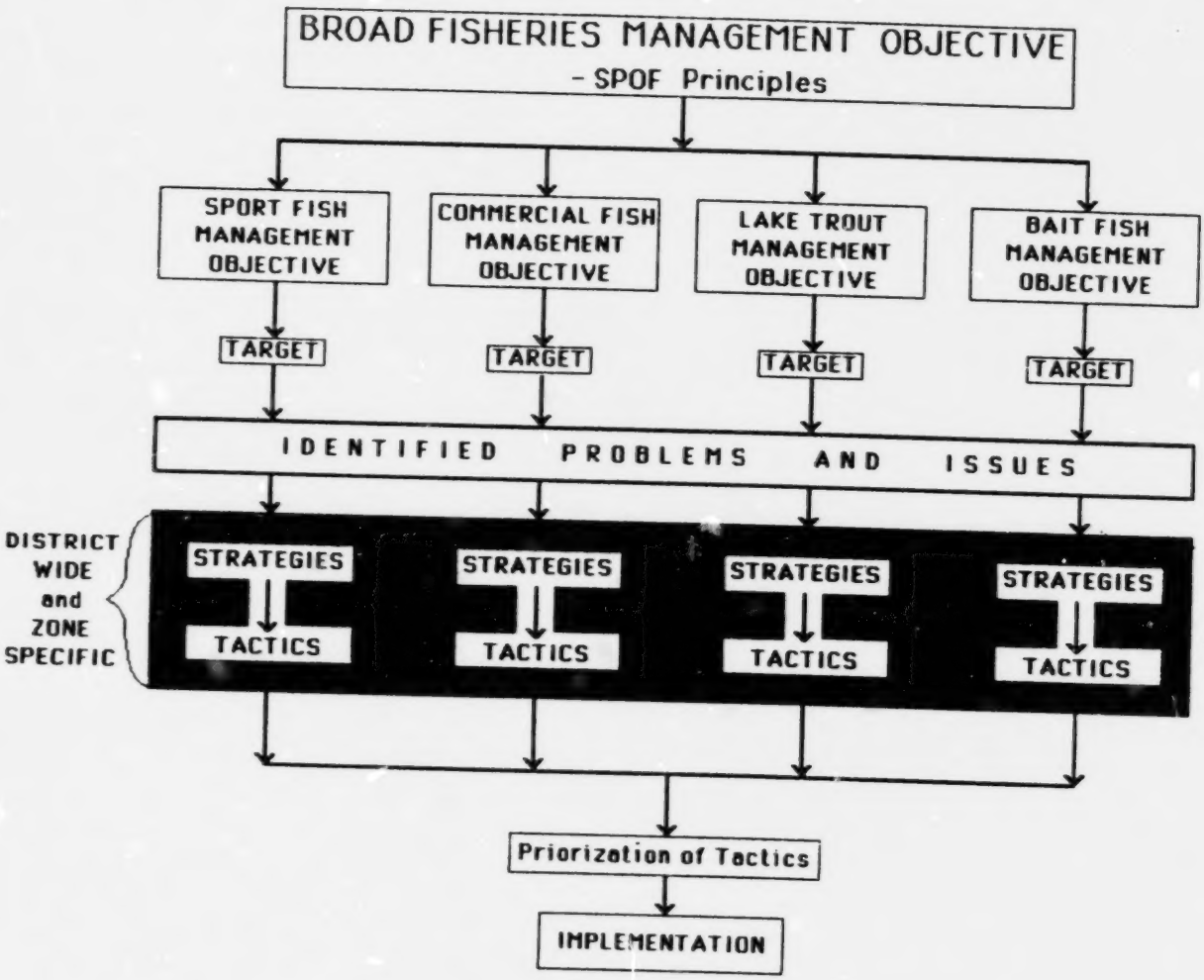


Figure 4. Flowchart to illustrate the development of fisheries management direction.

3.2 Specific Fisheries Management Objectives and Targets

3.2.1 SPORT FISH MANAGEMENT

Objective

To meet the demand for sport fishing consistent with the limits of an optimum sustained yield.

Target

To meet the anticipated demand in the year 2000 of 223,000 angler-days, with a quality standard target of 2 kg/angler-day, or 446,000 kilograms of fish.

Discussion

In 1980, 20,400 anglers expend 207,000 angler-days and harvest 414,000 kg of fish. The most important sport fish in the District in terms of numbers caught and kept, and in total harvest (weight) is walleye. The second most important sport fish is northern pike. Both of these sport fish species are widely distributed across the District.

Two other main sport fish species sought by anglers in the District are brook trout and lake trout. (See 3.2.3 Lake Trout Management) Although there are many streams and rivers in the District supporting brook trout, the majority of these remain inaccessible to the general angler. As new brook trout populations become road/snowmobile accessible, they experience high fishing effort by anglers. As a result some stocks are being overharvested. High quality brook trout populations of the Albany River have experienced overharvesting by anglers.

Other species caught include smallmouth bass, lake whitefish and lake sturgeon.

The total potential sport fish yield in the District is 3,722,000 kg/yr and the projected target is 446,000 kg/yr. Although the projected target is only 12% of the potential yield and would indicate underutilization, there are areas where the resource is stressed and in fact may be overharvested. The target is a District wide average. Fishing effort is largely concentrated on road accessible waterbodies and those lakes with tourism development. Approximately 16% of the water area is road accessible, concentrated in the extreme southern portion of the District.

In road accessible areas, brook trout and splake have been stocked to deflect some angler effort from overharvested natural brook trout populations and to increase fishing opportunities.

3.2.2 COMMERCIAL FISH MANAGEMENT

Objective

To encourage the harvest of commercial fish when it is biologically and economically feasible.

Target

To meet the demand of 487,000 kg of commercial food fish allocation by the year 2000 (under review).

Discussion

This target is currently under review, as historical harvests have been well below allocations (quotas) north of and including the Albany River. As quotas are realigned to reflect historical harvests, the target will require an amendment in the future.

In 1986, thirty-one lakes were licenced for commercial food fishing, with a total quota of 461,275 kg, worth an approximate value of $1.06 million. Only 52,719 kg (11.4% of the total quota) were harvested for a value of $122,162 (11.6% of total value).

The vast majority of commercial fishing activity occurs north of the Albany River by Indian fisheries. Indian fisheries accounted for 91.8% and 81.6% of the District's quota and harvest in 1986, respectively. Lake sturgeon and walleye are the target species of the Indian fisheries.

Non-Indian fisheries operate south of the Albany River. Here, the quotas are largely restricted to lake whitefish, with winter gill net licences having minimal walleye and northern pike incidental quotas.

In 1986, only 2,147 kg of coarse fish (suckers, burbot and ciscoe) were reported harvested from the District.

3.2.3 LAKE TROUT MANAGEMENT

Objective

To provide for the maintenance, protection and enhancement of lake trout populations, and to provide recreational angling opportunities to the general public for this species, based on an optimum sustained yield.

Target

To harvest a maximum of 20,840 kg of lake trout in the year 2000.

Discussion

There are only 18 natural lake trout lakes in the District (less than 1% of the Province's supply), covering 35,878 ha, and capable of sustaining 20,840 kg/yr (0.58 kg/ha/yr). Lake trout are sensitive to angler overexploitation and to degradation of their habitat.

Eleven lake trout lakes are road/snowmobile accessible. The remaining seven are remote and anglers fish them almost entirely through tourist operators.

Presently, one small lake trout lake has been overharvested (Yucca Lake) and one other lake (Grehan Lake) shows signs of past overharvesting. The completed questionnaires during the first public review period revealed that lake trout are the third most valued sport fish in the District, after walleye and northern pike.

3.2.4 BAIT-FISH MANAGEMENT

Objective

To encourage the harvest of bait-fish where it is biologically and economically feasible.

Target

To encourage the bait-fish industry to meet the projected demand of 67,700 dozen bait-fish in the year 2000, through natural and artificial culture.

Discussion

Presently, about 64,000 dozen bait-fish are harvested and sold each year. The resource of bait-fish exceeds the projected demand. Seventy-four whole blocks (296 quarter blocks) are presently available for licencing. Currently, 32 whole blocks are licenced (43% of available blocks). In addition, several of the licenced blocks are being underutilized. Since no major problems exist in the bait-fish industry at present, the short-term strategy will be to maintain the status quo, with the long-term strategy of increasing utilization and efficiency.

3.3 Problems and Issues

Five problems and issues that affect the utilization and sustainability of the fisheries resource in the Geraldton District have been identified. Public input to the first public review period expanded the user conflicts issue. Other problems and issues that the public identified had previously been identified by the planning team.

I Problem/Issue: Need of Fisheries Management Information.

There is a present need for more fisheries management data to:
- provide additional input to plans (timber, mining, hydro, pipeline, municipal, access, etc.);
- assess the utilization of the fisheries resource by the various user groups (fishing effort, success rates and overall harvest);
- assess the quality and health of particular fish populations (spawning, representative age classes, parasites, etc.);
- address other management decisions (stocking, rehabilitation, etc.)

II Problem/Issue: Fish Habitat Degradation.

The degradation of fisheries habitat adversely affects the fisheries resource. Waterbodies which have been degraded by alterations to fisheries habitat may not be producing at their estimated biological potential, and/or may affect human consumption of fish. These alterations include nutrient loading, contaminants, water crossings, water-level fluctuations and log drives.

III Problem/Issue: Need of Increased Public Awareness and Understanding.

Much of the public is not familiar with fundamental concepts of fisheries management, such as:

- the necessity of protecting, maintaining and rehabilitating fish habitat;
- techniques to maintain quality fishing;
- the need to utilize less desirable sport fish and coarse fish to maintain community balance. Many anglers conceive the fisheries resource as unlimited, resulting in localized overfishing.

IV Problem/Issue: Loss of Fish and Fishing Opportunities.

The loss of fish and fishing opportunities issue in the District includes the problems of:

- overfishing lake trout in Yucca Lake;
- the lack of coldwater species angling opportunities (there are only 18 natural lake trout and 20 natural brook trout lakes in the District);
- natural brook trout populations in District rivers are very localized and some have been subjected to excessive harvests (Albany River, Winisk River, Kawashkagama River);
- undesirable fish species introductions (smelt have been introduced illegally into Klotz Lake and possibly other lakes; yellow perch, northern pike and walleye have been illegally introduced into stocked brook trout lakes);
- underutilizing sport fish species such as northern pike, yellow perch and lake whitefish;
- natural mercury contamination
- inaccessibility to the majority of the lakes and rivers in the District by road.

V Problem/Issue: User Conflicts.

When a fisheries receives increasing demands by various user groups, conflicts for use often result. The following conflicts exist to some degree in the Geraldton District: between day use and remote tourism; between tourism, day use and Indian subsistence; between commercial fishing and tourism; and between local and non-resident anglers.

3.4 STRATEGIES AND TACTICS

The Geraldton District is being divided into zones to reflect different combinations of strategies and tactics.

Fisheries management strategies must be applied selectively based on:

- road accessibility is concentrated in the extreme southern portion of the District;
- resource extraction activities and other land use activities are predominantly concentrated in the extreme southern portion of the District;
- problems and issues differ significantly across the District;
- the distribution of fisheries resource users varies greatly across the District;
- there is an unequal distribution of fish species across the District;
- the logistics of achieving strategies requires that different tactics be employed (i.e., operating costs increase steadily from the southern boundary of the District, to the northern boundary).

The first subsection below describes those strategies and tactics which are applicable across the District. The proceeding four subsections indicate the management intent, description, resource use, strategies and tactics applicable to each specific zone.

3.4.1 DISTRICT WIDE STRATEGIES AND TACTICS

Fisheries management strategies and tactics which are to be applied across the Geraldton District (i.e., are not specific to particular fisheries management zones) are described here. Zone specific strategies and tactics are presented in sections 3.4.2, 3.4.3, 3.4.4 and 3.4.5.

DISTRICT WIDE STRATEGIES AND TACTICS

(S.F.: Sport Fish Management; C.F.: Commercial Fish Management; L.T.: Lake Trout Management; B.F.: Bait Fish Management)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
(I) Need of fisheries management information	1. Collect information on habitat inventory, harvest and population assessment.	- survey lakes on a need-to-know basis under the Aquatic Habitat Inventory program	S.F.,C.F.,L.T.,B.F.	Low
		- continue to encourage outside agencies and research groups to collect information as opportunities arise	S.F.,C.F.,L.T.,B.F.	Medium
		- implement a mandatory registration of cached boats	S.F.,L.T.	High
		- encourage voluntary creel surveys	S.F.,L.T.	Medium
(II) Fish habitat degradation	1. Identify the extent of habitat degradation, prevent further degradation and institute mitigative measures	- audit past and present fisheries protective prescriptions as they apply to "areas of concern"	S.F.,C.F.,L.T.,B.F.	High
		- encourage volunteer assistance for rehabilitation projects	S.F.,C.F.,L.T.,B.F.	Low
		- work with resource users and industries to institute mitigative measures to maintain or enhance the fisheries resource	S.F.,C.F.,L.T.,B.F.	Medium
(III) Need of Public Awareness and Understanding	1. Increase public awareness and understanding of fisheries management concepts and pertinent information	- produce an annual tabloid available for public distribution which outlines the Geraldton District's fisheries programs, addresses all problems and issues, advises of new regulations, etc.	S.F.,C.F.,L.T.,B.F.	High
		- investigate a Report-A-Poacher program with a financial reward (to be run by an independent outside agency)	S.F.,C.F.,L.T.,B.F.	Low
		- make material and resource people available for increased awareness (example: schools, fish and game clubs, interest groups)	S.F.,C.F.,L.T.,B.F.	High
		- provide awareness and training to resource users on how to prevent and/or minimize degradation of fish habitat	S.F.,C.F.,L.T.,B.F.	High

DISTRICT WIDE STRATEGIES AND TACTICS (continued)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
(IV) Loss of fish and fishing opportunities	1. Maintain and enhance trout fishing opportunities over the long term	- expand brook trout and splake stocking to additional suitable lakes and increase stocking densities to provide put-and-take fisheries	S.F.	High
		- implement a daily catch and possession limit of 2 lake trout, where only one may be greater than a set size, from "large" (> 250 ha) lake trout lakes (McKay, Pagwachuan, Long, Fernow, Charon, Esnagami, O'Sullivan, Superb, Opichuan, Luella, I-100 (South), Troutfly) The suggested size is 56 cm in total length. The regulation and set size will be reviewed with respect to adjoining Districts and fishing Division implications prior to finalization.	L.T.	High
		- implement a daily catch and possession limit of three (3) brook trout from all natural brook trout populations in lakes and rivers. This regulation will be reviewed with respect to adjoining Districts and fishing Division implications prior to finalization.	S.F.	High
	2. Increase the catch and harvest of underutilized sport fish and commercial fish	- use annual tabloid to address underutilization of sport fish (northern pike and yellow perch) and commerical fish (suckers, ciscoe)	S.F.,C.F.	Medium
		- provide a brochure and/or video which illustrates the techniques of filleting northern pike	S.F.	Low
		- provide a background map for public distribution of fishing opportunities in the District	S.F.	Medium
		- promote good quality lake whitefish lakes open for commercial fishing licences	C.F.	Medium
	3. Maintain and enhance walleye fishing opportunities	- implement a daily catch and possession limit of six (6) walleye, where only one (1) may be greater than a set size. The suggested size is 45 cm in total length. This regulation and set size will be reviewed with respect to adjoining Districts and fishing Division implications prior to finalization.	S.F.	High

DISTRICT WIDE STRATEGIES AND TACTICS (continued)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
	4. Maintain and enhance northern pike fishing opportunities	- implement a daily catch and possession limit of six (6) northern pike, where only one (1) may be greater than a set size. The suggested size is 76 cm in total length. This regulation and set size will be reviewed with respect to adjoining Districts and fishing Division implications prior to finalization.	S.F.	High
(V) User Conflicts	1. Reduce the potential for conflicts between fisheries users	- provide awareness through annual tabloid	S.F.,L.T.,C.F.	High

3.4.2 ZONE 1 - KENOGAMI RIVER

3.4.2.1 Management Intent

Maintain the existing quality of sport fish and lake trout fisheries.

Provide additional trout fishing opportunities.

Ensure multi-use fishing opportunities (e.g. day use, new commercial tourism, cottaging, bait fishing, commercial fishing).

3.4.2.2 Zone Description

(a) Location: This is the southernmost zone in the District. It is located south of the C.N.R. line from the District's western boundary, along the old C.N.R. line location to the District's eastern boundary. It includes Lower Twin Lake and Cordingley Lake.

(b) Population: Includes the communities of Geraldton (and surrounding townsites), Longlac, Nakina, Caramat, Longlac Reserve #58 and Longlac Reserve #77. The population in Zone 1 is 6993.

(c) Access: The majority (77%) of the zone is road accessible. It is bisected north and south by Highway #11, and east and west by Highway #584. There are about 700 km of all-weather logging roads.

(c) Use of Zone

(i) Anglers:
- majority of angling conducted on road accessible waterbodies
- angler origin from recent creel surveys: 31% local, 21% non-local, 48% non-residents

(ii) Tourism Development:
- 10 outpost camps (bed capacity 52). (7% of outpost camps in District)
- 25 lodges (bed capacity 500). (74% of lodges in District)

(iii) Commercial Fishing:
- 3 lakes licenced for lake whitefish and coarse fish only

(iv) Bait Fishing:
- 60 quarter blocks licenced (80% of licenced blocks in District)

(v) Indian Subsistence:
- permits have been issued on 8 lakes

(vi) Cottages:
- 277 cottages, road accessible on 9 lakes (42% on Wildgoose Lake)
- 14 remote cottages on 7 lakes

(vii) Timber Extraction:
- presently largest resource activity in Zone 1
- includes portions of Longlac, Nipigon and Hearst F.M.A.'s; Geraldton and Big Pic, company management units; Steel River and Onaman, crown management units.

TABLE 4 - KNOWN FISH SPECIES DATA FOR ZONE 1

Species	Number of Lakes	Lake Area (ha.)	Length of Rivers (Km)	River Area (ha.)	Allowable Yield (kg/yr)
Lake Trout	9	20,354.7	---	---	11,195
Brook Trout	9	8,357.0	1,088	1,628	5,648
Walleye	130	56,396.2	536	2,127	97,127
Northern Pike	242	73,636.2	655	2,636	106,647
Lake Whitefish	56	55,396.2	---	---	63,495
Smallmouth Bass	3	4,308.4	---	---	1,206
Lake Sturgeon	5	4,279.1	60	515	Unknown
Stocked Trout	13	436.2	---	---	1,309

(viii) Mining:
- prospecting very active across Zone 1
- gold extraction planned near Kenogamisis Lake and Long Lake.

(e) Nature of Fisheries Resource

	Zone 1	% of District Total
No. of Lakes	982	9
No. of Rivers/Streams	124	30
Total Surface Area	60,276 ha	6
Total Potential Yield	602,544 kg/yr	10

Table 4 lists data of known fish species waterbodies in Zone 1. Half of the known lake trout lakes and 54% of the allowable lake trout yield in the District are located here. About 90% of stocked trout lakes are found here.

3.4.2.3 Resource Use Influencing Fisheries Management

(a) Accessibility in this zone as a result of timber extraction activities is expected to increase moderately to the year 2000.

(b) Mining extraction activities, if reinitiated, will result in expanding the contaminant monitoring program.

(c) Expansion of cottaging may increase accessibility to fisheries resources.

(d) Trans Canada Highway Development Plan assists operators in locating new feasible tourism developments (main base lodges) along Highway #11.

(e) Long Lake Waterfront Development Plan proposed by the town of Longlac may influence fisheries management of Long Lake if implemented.

(f) Activities such as installations of natural gas pipeline and telephone cable, hydroelectric and water diversion plans, etc., require adequate protection for "areas of concern".

3.4.2.4 Strategies and Tactics

The fisheries management strategies and tactics that are designed to address the specific problems/issues of Zone 1 are indicated in the following chart.

ZONE 1 - KENOGAMI RIVER: STRATEGIES AND TACTICS

(S.F.: Sport Fish Management; C.F.: Commercial Fish Management; L.T.: Lake Trout Management; B.F.: Bait Fish Management)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
(I) Need of fisheries management information	1. Collect information on habitat inventory, harvest and population assessment	- conduct mini-lake and mini-stream surveys to obtain specific management information	S.F.,C.F.,L.T.,B.F.	Medium
		- conduct creel census programs on waterbodies which have potentially stressed fish populations and maintain a trend-through-time data series (Kenogamisis and Wildgoose lakes)	S.F.	High
		- conduct winter creel census programs on road/snowmobile accessible lake trout lakes (Yucca, Sun, Little Pic, Grehan, McKay, Pagwachuan, Charon, and Fernow)	L.T.,S.F.	High
		- implement an index netting program to evaluate the relative health of fish populations (McKay Lake)	S.F.,L.T.,C.F.	Medium
		- continue to monitor commercial fishing harvests	C.F.	Low
(II) Fish habitat degradation	1. Identify the extent of habitat degradation, prevent further degradation and institute mitigative measures	- assess the effects of water level fluctuations and log drives on fish stocks in Long Lake	S.F.,L.T.,C.F.	Medium
		- continue the contaminant monitoring program	S.F.,L.T.,C.F.	Medium
(III) Need of public awareness and understanding	1. Increase public awareness and understanding of fisheries management concepts and pertinent information	- District Wide tactics apply (page 24) - no zone specific tactics		

ZONE 1 - KENOGAMI RIVER: STRATEGIES AND TACTICS (continued)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
(IV) Loss of fish and fishing opportunities	1. Maintain and enhance trout fishing opportunities over the long term	- restrict access to sensitive natural brook trout populations	S.F.	Medium
		- implement a daily catch and possession limit of one (1) lake trout on "small" (< 250 ha) lake trout lakes (Sun, Yucca, Little Pic, Grehan); implement a season regulation if necessary	L.T.	High
		- implement a lake trout stocking program to establish introduced populations in new suitable lakes	L.T.	High
		- implement a daily catch and possession limit of seven (7) brook trout and splake, or any combination thereof from all stocked populations. This regulation will be reviewed with respect to adjoining Districts and fishing Division implications prior to finalization.	S.F.	High
		- discourage use of trout in fish derbies	S.F.,L.T.	High
	2. Maintain and enhance local walleye fishing opportunities	- promote live release in derbies for walleye	S.F.	High
	3. Improve and protect local smallmouth bass fishing opportunities	- investigate the potential of stocking smallmouth bass into suitable lakes	S.F.	Low
		- investigate and implement a closed season for bass which protects the spawning and guarding seasons and therefore improving bass fishing opportunities over the long term	S.F.	Medium
(V) User conflicts	1. Reduce the potential for conflicts between fisheries resource users	- ensure multi-use fishing opportunities (e.g. day use, new commercial tourism, new cottaging, bait-fishing, commercial fishing).	S.F.,C.F.,L.T.,B.F.	High

Note: All District Wide strategies and tactics are applicable to Zone 1.

3.4.3 ZONE 2 - LITTLE CURRENT RIVER

3.4.3.1 Management Intent

Maintain the quality of sport fish, commercial fish and lake trout fishing opportunities.

Protect and maintain the existing remote fishing opportunities.

Initiate and maintain the existing day use fishing opportunities.

3.4.3.2 Zone Description

(a) Location: This zone is situated south of the Ogoki River and the lower Little Current River tributaries watershed boundaries, to the northern boundary of Zone 1, and the Geraldton District boundaries.

(b) Population: This zone contain the community of Aroland which has a population of 210.

(c) Use of Zone

(i) Anglers
- the majority of angling in this zone is conducted by clientele of tourism operators and outfitters.
- angler origin composition is 39% local, 8% non-local and 53% non-residents.

(ii) Tourism Developments
- 41 outpost camps on 32 waterbodies (bed capacity 270) (29% of District outpost camps).
- 7 lodges on 7 waterbodies (bed capacity 141) (21% of Distrist lodges).

(iii) Commercial Fishing
- 3 lakes licenced primarily for harvest of lake whitefish and coarse fish, with minimum incidental quotas for walleye, northern pike and yellow perch.

(iv) Bait Fishing
- 15 quarter-blocks licenced (20% of licenced blocks in District).

(v) Indian Subsistence
- permits have been issued for 2 lakes.

(vi) Cottaging
- 16 cottages on O'Sullivan Lake
- 4 remote cottages on Wababimiga Lake.

(vii) Timber Extraction
- largest resource activity in zone.
- includes Nakina and Longlac F.M.A.'s; Ogoki company management unit; Little Current F.M.U.

(viii) Mining
- prospecting is active.
- Luella Mine (O'Sullivan Lake) periodically operating.

TABLE 5 - KNOWN FISH SPECIES DATA FOR ZONE 2

Species	Number of Lakes	Lake Area (ha.)	Length of Rivers (km)	River Area (ha.)	Allowable Yield (kg/yr)
Lake Trout	3	12,319.6	---	---	6,628
Brook Trout	9	13,354.6	1,843	2,934	12,243
Walleye	53	39,794.0	387	3,173	77,503
Northern Pike	76	49,347.0	257	2,711	74,708
Lake Whitefish	29	37,787.7	---	---	48,094
Smallmouth Bass	5	1,520.7	---	---	961
Lake Sturgeon	--	---	---	---	---
Stocked Trout	1	11.3	---	---	34

(e) Nature of Fisheries Resource

	Zone 2	% District Total
No. of Lakes	538	5
No. of Rivers/Streams	96	23
Total Surface Area	69,113 ha	6
Total Potential Yield	419,455 kg/yr	7

Table 5 lists data on known fish species in Zone 2. Walleye and northern pike are the most common sport fish. About 14% of the District's known allowable brook trout yield is produced here. Zone 2 contains 17% of the District's lake trout lakes (O'Sullivan, Superb, Esnagami) and 32% of the District's lake trout allowable yield.

3.4.3.3 Resource Use Influencing Fisheries Management

(a) Accessibility to fisheries resources as a result of timber resource access road networks is expected to increase considerably (especially in the eastern half of this zone) by the year 2000. Within the Nakina Forest Management Unit, the proposed resource access road networks to the year 2000 are to extend north toward the Kapikotongwa River and the Little Current River.

(b) Remote tourism is the primary fisheries resource activity in Zone 2. A restricted boat cache policy on Marshall, Ara, Meta and Esnagami Lakes is currently in place.

3.4.3.4 Strategies and Tactics

The fisheries management strategies and tactics that are designed to address specific problems/issues of Zone 2 are listed in the following chart.

ZONE 2 - LITTLE CURRENT RIVER: STRATEGIES AND TACTICS

(S.F.: Sport Fish Management; C.F.: Commercial Fish Management; L.T.: Lake Trout Management; B.F.: Bait Fish Management)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
(I) Need of fisheries management information	1. Collect information on habitat inventory, harvest and population assessment	- conduct mini-lake and mini-stream surveys to obtain specific management information	S.F.,C.F.,L.T.,B.F.	Medium
		- conduct creel census programs on waterbodies which have potentially stressed fish populations and maintain a trend-through-time data series	S.F., L.T.	High
		- continue index netting program to evaluate the relative health of fish populations (Ara, Esnagami, O'Sullivan Lakes)	S.F.,L.T.,C.F.	High
		- continue to monitor commercial fishing harvests	C.F.	Medium
		- assess the stocked lake trout population in Lucy Lake to determine if it is self-sustaining	L.T.	Medium
(II) Fish habitat degradation	1. Identify the extent of habitat degradation, prevent further degradation and institute mitigative measures to protect the fisheries resource	- District Wide tactics apply (page 24) - no zone specific tactics		
(III) Need of public awareness and understanding	1. Increase public awareness and understanding	- District Wide tactics apply (page 24) - no zone specific tactics		
(IV) Loss of fish and fishing opportunities	1. Maintain and enhance trout fishing opportunities over the long term	- restrict access to sensitive brook trout populations	S.F.	Medium
		- discourage the use of brook trout and lake trout in fish derbies	S.F.,L.T.	High
		- implement a daily catch and possession limit of seven (7) brook trout and splake, or any combination thereof, from all stocked populations. This regulation will be reviewed with respect to adjoining Districts and fishing Division implications prior to finalization.	S.F.	High

ZONE 2 - LITTLE CURRENT RIVER: STRATEGIES AND TACTICS (continued)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
	2. Improve and maintain the local walleye fishing opportunities	- through procedures of the Environmental Assessment Act, identify recipient lakes for an adult walleye transfer program to increase day-use walleye fishing opportunities	S.F.	High
		- promote live release in derbies for walleye	S.F.	High
	3. Improve and protect the local smallmouth bass fishing opportunities	- investigate the potential of stocking smallmouth bass into suitable lakes	S.F.	Low
		- investigate a closed season for bass which protects the spawning and guarding seasons, thereby improving bass fishing opportunities over the long term	S.F.	Medium
(V) User Conflicts	1. Reduce the potential for conflicts between remote tourism operators and road accessible anglers	- increase road accessible fishing opportunities (e.g. adult walleye transfer program)	S.F.	High
	2. Reduce the potential for conflicts between anglers/tourist operators and commercial fishermen	- ensure commercial fishermen are targetting for lake whitefish and coarse fish and not for incidental walleye and northern pike quotas	C.F.	High

NOTE: All District Wide strategies and tactics are applicable to Zone 2.

3.4.4 ZONE 3 - OGOKI RIVER

3.4.4.1 Management Intent

Maintain the quality of sport fish, commercial fish and lake trout fishing opportunities.

Encourage expansion of remote fishing opportunities (e.g. main base lodges, outpost camps).

Restrict commercial fishing to Ogoki and Shabuskwia Lakes, targetting for lake whitefish and coarse fish.

3.4.4.2 Zone Description

(a) Location: South of the Albany River to the northern boundary of Zone 2, and to the Geraldton District boundaries.

(b) Population: No communities present.

(c) Access: Presently, no road access exists in this zone. Access is by air, and by water to the Ogoki River system via the Ogoki Road (Nipigon M.N.R. District).

(d) Use of Zone

(i) Anlgers
- almost all of non-resident origin
- remote fishing opportunities only

(ii) Tourism Developments
- 53 outpost camps on 41 waterbodies (bed capacity of 328) (38% of District outpost camps)

(iii) Commercial Fishing
- one lake licenced primarily for lake whitefish, with incidental quotas for walleye and northern pike

(iv) Indian Subsistence
- permits have been issued for the Ogoki River

(v) Timber Extraction
- no extraction to date
- includes portion of Nakina F.M.A.; Ogoki company management unit; Dusey and Little Current, crown management units

(e) Nature of Fisheries Resource

	Zone 3	% District Total
No. of Lakes	958	9
No. of Rivers/Streams	29	7
Total Surface Area	96,125 ha	9
Total Potential Yield	592,809 kg/yr	10

TABLE 6 - KNOWN FISH SPECIES DATA FOR ZONE 3

Species	Number of Lakes	Lake Area (ha.)	Length of Rivers (km)	River Area (ha.)	Allowable Yield (kg/yr)
Lake Trout	4	1,788.8	---	---	1,788
Brook Trout	--	---	1,047	6,430	11,676
Walleye	47	43,643.3	1,102	6,336	82,149
Northern Pike	57	46,138.7	1,055	6,322	74,415
Lake Whitefish	28	32,150.9	---	---	44,488
Lake Sturgeon	5	13,012.5	209	5,250	Unknown

Table 6 lists data on known fish species in Zone 3. Walleye and northern pike are the most common sport fish. About 13% of the District's brook trout allowable yield is found here. This zone contains 20% of the lake trout lakes (Luella, Faircloth, Opichuan, South), and 9% of the District's lake trout allowable yield. (Faircloth Lake is less than 250 ha in surface area). Nearly 10% of the District's lake sturgeon waterbody surface area is located here.

3.4.4.3 Resource Use Influencing Fisheries Management

(a) Largest activity in zone is remote tourism.

(b) The Waboose Dam on the Ogoki River diverts water to Lake Nipigon for hydroelectric generation. This creates large water fluctuations downstream of the dam in the Geraldton District.

3.4.3.4 Strategies and Tactics

The fisheries management strategies and tactics that are designed to address specific problems/issues of Zone 3 are listed in the following chart.

ZONE 3 - OGOKI RIVER: STRATEGIES AND TACTICS

(S.F.: Sport Fish Management; C.F.: Commercial Fish Management; L.T.: Lake Trout Management; B.F.: Bait Fish Management)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
(I) Need of fisheries management information	1. Collect information on habitat inventory, harvest and population assessment	- District Wide tactics apply (page 24) - no zone specific tactics		
(II) Fish habitat degradation	1. Assess the effects of man-made water level fluctuations on fish stocks	- determine if water level fluctuations on the Ogoki River system are adversely affecting the fisheries	S.F.,C.F.	Low
(III) Need of public awareness and understanding	1. Increase public awareness and understanding of fisheries management concepts	- District Wide tactics apply (page 24) - no zone specific tactics		
(IV) Loss of fish and fishing opportunities	1. Maintain and enhance trout fishing opportunities over the long term	- implement a catch and possession limit of one (1) lake trout from "small" (less than 250 ha) lake trout lakes (Faircloth)	L.T.	High
(V) User conflicts	1. Reduce the potential for conflicts between fisheries resource users	- District Wide tactics apply (page 24) - no zone specific tactics		

NOTE: All District Wide strategies and tactics are applicable to Zone 3.

3.4.5 ZONE 4 - ALBANY NORTH

3.4.5.1 Management Intent

Maintain the quality of sport fish, commercial fish and lake trout fishing opportunities.

Encourage the expansion of Indian tourism developments, through conversion of commercial fishing quotas for walleye, northern pike and lake sturgeon to remote sport fishing opportunities.

3.4.5.2 Zone Description

(a) Location: This zone includes the Albany River and extends north to all Geraldton District boundaries.

(b) Population: Includes the communities of Ogoki Post, Fort Hope, Lansdowne House, Kasabonika, Summer Beaver and Webequie, with a total population of 2268.

(c) Access: Presently accessible by air. Albany River may be accessed through long water trips.

(d) Use of Zone

(i) Anlgers
- largely non-residents through tourist operators and outfitters

(ii) Tourism Developments
- 37 outpost camps on 27 waterbodies (bed capacity of 296) (26% of District outpost camps)
- 2 lodges on 2 lakes (bed capacity of 60) (6% of District lodges)

(iii) Commercial Fishing
- presently 16 lakes and rivers are licenced by Indian fisheries (quotas: 21,844 kg lake sturgeon; 165,530 kg lake whitefish; 156,330 kg walleye; 71,401 kg northern pike)

(iv) Indian Subsistence
- occurs mainly in close proximity to Indian communities

(v) Timber Extraction
- non-commercial extraction of timber in vicinity of communities
- includes a portion of the Lake St. Joseph Management Unit

(vi) Mining
- prospecting is active in the southern portion of this zone

(e) Nature of Fisheries Resource

	Zone 4	% District Total
No. of Lakes	7,899	76
No. of Rivers/Streams	153	36
Total Surface Area	838,216 ha	79
Total Potential Yield	4,320,192 kg/yr	73

TABLE 7 - KNOWN FISH SPECIES DATA FOR ZONE 4

Species	Number of Lakes	Lake Area (ha.)	Length of Rivers (km)	River Area (ha.)	Allowable Yield (kg/yr)
Lake Trout	2	1,414.7	---	---	1,232
Brook Trout	2	1,826.8	1,328	31,127	59,753
Walleye	66	206,902.2	4,841	46,080	464,038
Northern Pike	75	214,034.2	4,853	46,083	371,469
Lake Whitefish	58	201,322.1	554	31,076	313,198
Lake Sturgeon	22	125,211.7	793	40,163	Unknown

The majority of the District's lakes, total surface area and total potential yield exists in this zone.

Table 7 lists data on known fish species in Zone 4. Walleye and northern pike are the most common sport fish. About 67% of the District's brook trout allowable yield is produced here. Two large coldwater rivers (Albany and Winisk) account for the majority of brook trout allowable yield. The majority of lake sturgeon waterbodies (88% by surface area) is contained in this zone.

3.4.5.3 Resource Use Influencing Fisheries Management

(a) The present policy requires that a tourist operator be a resident of this zone for any disposition to the tourism industry.

(b) The tourism and commercial fishing industries are the largest activities at present.

3.4.5.4 Strategies and Tactics

The fisheries management strategies and tactics that are designed to address specific problems/issues of Zone 4 are listed in the following chart.

ZONE 4 - ALBANY NORTH: STRATEGIES AND TACTICS

(S.F.: Sport Fish Management; C.F.: Commercial Fish Management; L.T.: Lake Trout Management; B.F.: Bait Fish Management)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
(I) Need of fisheries management information	1. Collect information on habitat inventory, harvest and population assessment	- assess the brook trout harvests and populations of the Albany River and Winisk River	S.F.	High
		- assess the experimental management of the brook trout trophy fishery on the Albany River	S.F.	High
(II) Fish habitat degradation	1. Identify the extent of habitat degradation, prevent further degradation, and institute mitigative measures to protect the fisheries resource	- District Wide tactics apply (page24) - no zone specific tactics		
(III) Need of public awareness and understanding	1. Increase public awareness and understanding of fisheries management concepts	- provide educational materials to lake sturgeon commercial fishermen and fish buyers on the life history of lake sturgeon and its sensitivity to overfishing	C.F.	High
(IV) Loss of fish and fishing opportunities	1. Maintain and enhance trout fishing opportunities over the long term	- will implement the regulation to establish a brook trout trophy fishery on the Albany River (Achapi Lake to Albany Forks), where the daily catch limit is two (2) and of minimum size 51 cm (20") during the open season of January 1 to August 31	S.F.	High
		- determine the level of harvest and fishing effort that the brook trout population of the Winisk River can sustain	S.F.	High
		- implement a daily catch and possession limit of one (1) lake trout from "small" (less than 250 ha) lake trout lakes (Merpaw)	L.T.	High

ZONE 4 - ALBANY NORTH: STRATEGIES AND TACTICS (continued)

PROBLEM	STRATEGY	TACTIC	SPECIFIC FISHERIES MANAGEMENT	PRIORITY
	2. Protect and maintain lake sturgeon populations	- prevent overharvests and illegal harvests of lake sturgeon by informing commercial lake sturgeon fishermen and fish buyers of existing regulations pertaining to the legal harvest and sale of lake sturgeon	C.F.	High
		- investigate the social and economic benefits of converting commercial lake sturgeon quotas to tourism sport fishing opportunities	C.F.,S.F.	High
(V) User conflicts	1. Reduce the potential for conflicts between tourism and commercial fishing industries	- realign commercial fishing quotas to reflect historical harvests, thereby allowing an increase in remote sport fishing opportunities	C.F.,S.F.	High

NOTE: All District Wide strategies and tactics are applicable to Zone 4.

4.0 IMPLEMENTATION

An implementation schedule of proposed tactics to be conducted over the first five years of this plan (1988 to 1992), are outlined in the following chart under the identified problems/issues. The tactics for each are to be implemented in order of priority as indicated in the District Wide and zones' strategies and tactics sections. The initiation and/or completion of tactics will be dependent on existing and additional funding received.

Please note that it will be necessary to further discuss the implications of all proposed regulations with adjoining districts and existing fishing divisions prior to implementation.

An enforcement officer operational plan is tentatively to be produced in 1989, and will cover all identified problems and issues.

GERALDTON DISTRICT FISHERIES MANAGEMENT IMPLEMENTATION SCHEDULE 1988-1992

(S.F.: Sport Fish Management; **C.F.:** Commercial Fish Management; **L.T.:** Lake Trout Management; **B.F.:** Bait Fish Management; **E.A.:** Environmental Assessment)

(* The regulations and set sizes will be reviewed with respect to adjoining Districts and fishing Division implications prior to finalization.)

PROBLEM/ISSUE	TACTICS	SPECIFIC FISHERIES MANAGEMENT	LOCATION	YEAR	E.A. REQUIRED	EXISTING FUNDING	ADDITIONAL FUNDING
Need of fisheries management information	- implement a mandatory registration of cached boats	S.F., L.T.	District Wide	1989		X	
	- survey lakes on a need-to-know basis under the Aquatic Habitat Inventory Survey program	S.F., C.F. L.T., B.F.	Zone 2:				
			John Bill Lake	1988		X	
			District Wide	1988 to 1992		X	X
	- continue to encourage outside agencies and research groups to collect information as opportunities arise	S.F., C.F. L.T., B.F.	District Wide	1988 to 1992			X
	- continue to investigate new lakes for the trout stocking program	S.F., L.T.	Zone 1, Zone 2	1988 to 1992	X	X	
	- continue to identify sensitive fisheries habitat in streams	S.F.	Zone 1, Zone 2	1988 to 1992		X	
	- continue to investigate lake whitefish populations for commercial grading	C.F.	Zone 1, Zone 2	1988, 1989		X	
	- continue to conduct winter creel census programs on lake trout lakes	L.T.	Zone 1, Zone 2	1988 to 1992		X	
	- conduct creel census programs on waterbodies which have potentially stressed fish populations and maintain a trend-through-time data series	S.F.	Zone 1: Kenogamisis Lake Wildgoose Lake	1988 to 1992		X	X
			Zone 2: Marshall Lake	1988			X
	- encourage voluntary creel surveys such as the angler cooperator program	S.F., L.T.	District Wide	1988 to 1992		X	

PROBLEM/ISSUE	TACTICS	SPECIFIC FISHERIES MANAGEMENT	LOCATION	YEAR	E.A. REQUIRED	EXISTING FUNDING	ADDITIONAL FUNDING
	- implement angler voluntary creel stations	S.F., L.T.	Zone 1:				
			McKay Lake	1988		X	
			Chipman Lake	1988		X	
			Klotz Lake	1988		X	
			Burrows Lake	1988		X	
			Obobka Lake	1988		X	
			Icicle Lake	1988		X	
			Tricorn Lake	1989		X	
			Zone 2:				
			Lucy Lake	1988		X	
			Abamasagi Lake	1988		X	
	- assess the stocked lake trout population in Lucy Lake to determine if it is self-sustaining		Zone 2: Lucy Lake	1988		X	
	- continue index netting program to evaluate the relative health of fish populations	S.F., C.F. L.T.	Zone 1:				
			McKay Lake	1989, 1990		X	X
			Zone 2:				
			Ara Lake	1988, 1992		X	X
			Esnagami Lake	1988, 1992		X	X
			O'Sullivan Lake	1989, 1990		X	X
	- continue to monitor commercial fishing harvests	C.F.	Zone 1, Zone 2	1988 to 1992		X	
	- assess brook trout harvests and populations	S.F.	Zone 4:				
			Albany River	1989			X
			Winisk River	1988			X
	- assess the experimental management of the brook trout trophy fishery on the Albany River	S.F.	Zone 4: Albany River	1990 to 1992			X
Fish Habitat	- audit past and present fisheries protective prescriptions as they apply to "areas of concern"	S.F., C.F. L.T., B.F.	Zone 1, Zone 2	1988 to 1992		X	
	- encourage volunteer assistance for rehabilitation projects	S.F., C.F. L.T., B.F.	District Wide	1988 to 1992			X

PROBLEM/ISSUE	TACTICS	SPECIFIC FISHERIES MANAGEMENT	LOCATION	YEAR	E.A. REQUIRED	EXISTING FUNDING	ADDITIONAL FUNDING
	- work with resource users and industries to institute mitigative measures to maintain or enhance the fisheries resource	S.F., C.F. L.T., B.F.	District Wide	1988 to 1992		X	
	- analyze water level fluctuation data for effects on lake trout spawning sites in Long Lake	L.T.	Zone 1	1990		X	X
	- analyze water level fluctuations data for effects on the fisheries resource on the Ogoki River system	S.F., C.F.	Zone 3	1991		X	X
	- conduct literature search for effects of water level fluctuations on fish stocks	S.F., C.F. L.T.	Zone 1, Zone 3	1988		X	
	- continue contaminant monitoring program	S.F., C.F. L.T.	Zone 1, Zone 2	1988 to 1992		X	X
Need of increased public awareness and understanding	- produce an annual tabloid outlining the District's fisheries programs, address problems and issues, advise of new regulations, etc.	S.F., C.F.	District Wide	1989 to 1992		X	
	- investigate a Report-a-Poacher program with a financial reward (to be run by an independent outside agency)	S.F., C.F. L.T., B.F.	District Wide	1988		X	
	- make material and resource people available for increasing awareness and understanding	S.F., C.F. L.T., B.F.	District Wide	1988 to 1992		X	
	- provide awareness and training to resource users on how to prevent and/or minimize degradation of fish habitat	S.F., C.F. L.T., B.F.	District Wide	1988 to 1992		X	
	- provide a brochure and/or video which illustrates the techniques of filleting northern pike	S.F.	District Wide	1989		X	X
	- provide a background map for public distribution of fishing opportunities in the District	S.F., C.F.	District Wide	1988		X	

PROBLEM/ISSUE	TACTICS	SPECIFIC FISHERIES MANAGEMENT	LOCATION	YEAR	E.A. REQUIRED	EXISTING FUNDING	ADDITIONAL FUNDING
	- provide educational materials to lake sturgeon commercial fishermen and fish buyers on the life history of lake sturgeon and its sensitivity to overfishing	C.F.	Zone 4	1988		X	
	- prevent overharvests and illegal harvests of lake sturgeon fishermen and fish buyers of existing regulations pertaining to the legal harvest and sale of lake sturgeon	C.F.	Zone 4	1988		X	
Loss of fish and fishing opportunities	- expand brook trout and splake stocking to additional suitable lakes and increase stocking densities to provide put-and-take fisheries	S.F.	District Wide	1988 - 1992	X	X	
	- implement a lake trout stocking program to establish introduced populations in new suitable waters	L.T.	Zone 1: MacLeod Lake	1989 - 1992	X	X	
	* apply for regulation to implement a lake trout trophy fishery where only one (1) lake trout over 56 cm (22 inches) may be kept in a daily catch limit of two (2) from "large" lake trout lakes	L.T.	Zone 1: Charon Lake Fernow Lake Long Lake McKay Lake Pagwachuan Lake Zone 2: Esnagami Lake O'Sullivan Lake Superb Lake Zone 3: Luella Lake Opichuan Lake South Lake Zone 4: Troutfly Lake	1988		X	

PROBLEM/ISSUE	TACTICS	SPECIFIC FISHERIES MANAGEMENT	LOCATION	YEAR	E.A. REQUIRED	EXISTING FUNDING	ADDITIONAL FUNDING
	* apply for regulation to implement a daily catch and possession limit of one (1) lake trout from "small" lake trout lakes	L.T.	Zone 1: Grehan Lake Little Pic Lake Sun Lake Yucca Lake Zone 3: Faircloth Lake Zone 4: Merpaw Lake	1988		X	
	* apply for regulation to implement a daily catch and possession limit of three (3) brook trout from all natural brook trout populations in rivers and streams	S.F.	District Wide	1988		X	
	* apply for regulation to implement a daily catch and possession limit of seven (7) brook trout and splake, or any combination thereof, from all stocked populations	S.F.	Zone 1, Zone 2	1988		X	
	- implement the regulation to establish a brook trout trophy fishery on the Albany River (Achapi Lake to Albany Forks), where the daily catch is two (2) and of minimum size 51 cm (20 inches) during the open season of January 1 to August 31	S.F.	Zone 4	1989		X	
	* apply for regulation to implement a daily catch and possession limit of six (6) walleye, where only one (1) may be greater than 45 cm (17.5 inches) in total length	S.F.	District Wide	1988		X	
	* apply for regulation to implement a daily catch and possession limit of six (6) northern pike: where only one (1) may be greater than 76 cm (30 inches) in total length	S.F.	District Wide	1988		X	

PROBLEM/ISSUE	TACTICS	SPECIFIC FISHERIES MANAGEMENT	LOCATION	YEAR	E.A. REQUIRED	EXISTING FUNDING	ADDITIONAL FUNDING
	* apply for divisional boundary change	S.F., C.F. L.T., B.F.	District Wide	1988		X	
	- discourage use of trout in fish derbies	S.F., L.T.	Zone 1, Zone 2	1988 to 1992		X	
	- encourage live release derbies for walleye	S.F.	Zone 1, Zone 2	1988 to 1992		X	
	- restrict access to sensitive natural brook trout populations	S.F.	Zone 1, Zone 2	1988 to 1992		X	
	- implement a closed season for smallmouth bass which protects the spawning and guarding seasons	S.F.	Zone 1, Zone 2	1989		X	
	- adult walleye transfer program (potential lakes - P)	S.F.	Zone 2:				
			Wababimiga Lake	1989	X		X
			Alph (P)	1990	X		X
			Haskett (P)	1990	X		X
			John Bill (P)	1991	X		X
			Squaw (P)	1991	X		X
	- promote good quality lake whitefish lakes open for commercial fishing licences	C.F.	District Wide	1988 to 1992		X	
	- investigate the social and economic benefits of converting commercial lake sturgeon quotas to remote sport fishing opportunities	C.F., S.F.	Zone 4	1988		X	
User Conflicts	- provide awareness of various fisheries resources needs	S.F., C.F. L.T.	District Wide	1988 to 1992		X	
	- restrict non-resident camping on Crown Land where necessary through the Crown Land Camping Program	S.F., L.T.	Zone 1	1988 to 1992		X	
	- reduce the potential for conflicts between remote tourism operators and day-use anglers by increasing day-use fishing opportunities	S.F., L.T.	Zone 2	1989 to 1991	X	X	X

PROBLEM/ISSUE	TACTICS	SPECIFIC FISHERIES MANAGEMENT	LOCATION	YEAR	E.A. REQUIRED	EXISTING FUNDING	ADDITIONAL FUNDING
	- ensure commercial fishermen are targetting for lake whitefish and coarse fish and not for incidental walleye and northern pike quotas	S.F., C.F.	Zone 2	1988 to 1992		X	
	- reduce the potential for conflicts between tourism and commercial fishing industries by realigning commercial fishing quotas to reflect historical harvests, thereby allowing and increase in remote sport fishing opportunities	S.F., C.F.	Zone 4	1989		X	

5.0 PUBLIC REVIEW

This document is a proposed Fisheries Management Plan for the Geraldton District. Information and concerns expressed by the public will be carefully considered prior to the completion of the Final Plan.

Since this Fisheries Management Plan will affect your community as well as the fisheries resource, the Ministry of Natural Resources (O.M.N.R.) is committed to public consultation. The O.M.N.R. feels that public involvement and input is essential for the overall success of an approved Fisheries Management Plan in the District.

Open houses and individual presentations will be held to provide the public with opportunities to discuss any and all aspects of the fisheries resource, planning process and proposed Management Plan.

The Geraldton District Fish and Wildlife staff are, however, available at any time should you wish to further discuss fisheries management in the Geraldton District or provide additional resource information or potential strategies you feel should be included in the preparation of the District's plan.

The public is invited to submit their comments regarding this document and the open houses on the provided questionnaire, and/or on a separate submission if so desired. Comments received by May 27, 1988 will be summarized and analyzed, and will be used in the preparation of the Final Fisheries Management Plan. The Final Plan is tentatively to be approved and available for public purchase in July 1988.

Please give your comment sheets to the O.M.N.R. staff at the open houses, drop them off at one of our offices, or mail them to:

District Manager
Geraldton District
Box 640
Geraldton, Ontario
P0T 1M0

G L O S S A R Y

allowable yield: the recommended maximum sustainable annual harvest of a particular fish species, recognizing such constraints as habitat suitability, angler preferences, social concerns and past harvesting.

angler day: a measure of fishing effort by anglers with each day of fishing by one angler equivalent to one angler day.

area of concern: geographically-defined areas of value to fishery users/uses which could be affected by other resource uses, and which may require modifications to those uses.

bait fish: any fish which may be legally harvested by the commercial bait fish industry.

commercial food fishing: the harvest and sale of fish for human consumption.

fish community: co-inhabiting fish species of a particular waterbody.

habitat: the place or type of conditions where fish species naturally or normally occur.

harvest: fish kept by the various fish resource users.

hectare (ha): measure of area equivalent to 10,000 m^2, or two and one-half (2.5) acres.

impounding gear: commercial food fishing gear used to capture fish alive, thereby permitting the release of sport fish species which are not on the licence.

incidental quota: a minimum allocation to the commercial fish industry of a particular fish species.

Indian subsistence: Indian harvest of fish for personal use and survival.

Integrated Resource Management (IRM): is the coordination of O.M.N.R. programs and activities so that the long-term benefits from the use of resources are maximized and conflicts between uses and users are minimized.

kilogram (kg): a measure of mass equivalent to 1,000 grams, or two and one-fifth (2.2) pounds.

local: any angler whose principal residence is in the Geraldton District.

major rivers and streams: watercourses which are known to or suspected of supporting sport fish throughout the year.

mitigative measures: prescriptions to alleviate adverse effects on fish habitat caused by resource extraction or other activities.

non-local: any angler whose principal residence is in Ontario, but outside of the Geraldton District.

non-resident: an angler who is not a resident of Ontario.

objective: a qualitative aim which the Ministry's efforts intend to accomplish.

potential yield: the theoretical annual sustainable harvest of sport fish and coarse fish that could be derived under optinum environmental, social and economic conditions.

quality catch standard: the average angler harvest of sport fish per angler day; in the Geraldton District this is 2 kg per angler day.

quota: the amount of fish allocated by species to commercial food fisheries.

rehabilitation: efforts to enhance or restore degraded or stressed fish populations and fisheries habitat to their original condition.

resident: any angler whose principal residence is in Ontario.

sport fish: in the Geraldton District, this includes the species walleye, sauger, northern pike, lake trout, brook trout, splake, lake whitefish, yellow perch, smallmouth bass, and lake sturgeon.

strategy: a general statement of intent addressed to meet the demand and to overcome particular problems or issues.

tactic: a specific action taken to meet a strategy.

target: a quantified end to be achieved by a specific date.

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